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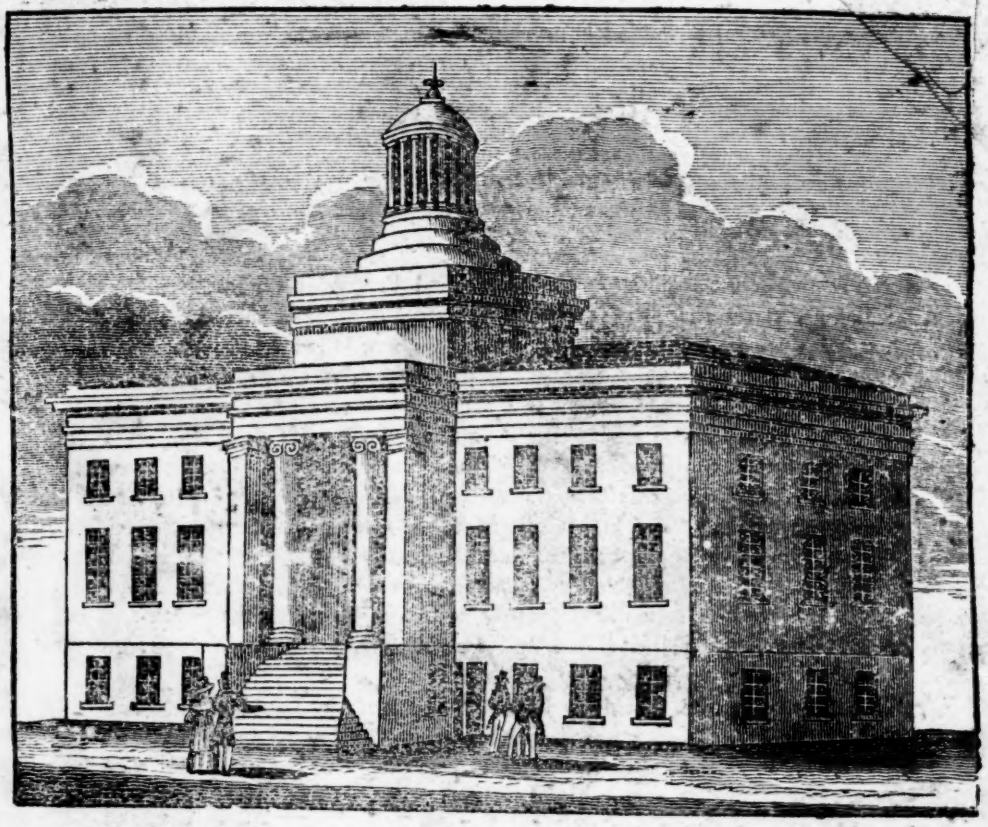
THE

LOUISVILLE JOURNAL

OF

MEDICINE AND SURGERY.



NO. 1....JANUARY, 1838.

THE
LOUISVILLE JOURNAL OF MEDICINE AND SURGERY.

EDITED BY

LUNSFORD P. YANDELL, M. D.,

PROFESSOR OF CHEMISTRY IN THE LOUISVILLE MEDICAL INSTITUTE,

HENRY MILLER, M. D.,

PROFESSOR OF OBSTETRICS AND THE DISEASES OF WOMEN AND CHILDREN IN THE SAME,

AND

THEODORE S. BELL, M. D.

The Subscribers, in offering to the Medical Profession a new Journal of Medicine, are not unapprized either of the great number or merits of those already before the public; but they hope that there is yet room for another, and that the one which they are about to publish, will not prove unworthy of the veteran corps which it follows into the field.

The peculiar position and advantages of Louisville; its close connexion and easy intercourse with all sections of the country; its Medical School, just organized under the most flattering auspices; its Hospital, abounding in cases of interest; and the number and intelligence of its practising physicians, render it the most eligible point for the establishment of a journal, which shall circulate extensively throughout every portion of the valley of the Mississippi, and be a medium at once for imparting to the profession in the South and West the discoveries in Medicine, and for communicating their views and discoveries to the world.

It will be supported especially by the Faculty of the Louisville Medical Institute, most of whom are already advantageously known as popular and able writers; and the Editors have, moreover, a pledge of the co-operation of a number of the ablest pens in the country.

The Journal will consist of Original Papers; Reports of Cases attended at the Louisville Marine Hospital and in private practice; Reviews of New Works on all branches of Medicine; and an extended summary of medical intelligence. The aim will be to make it a full and faithful record of the improvements in the profession.

The Louisville Journal of Medicine and Surgery will be published Quarterly, in numbers of two hundred and fifty pages, on a new type and good paper, at Five Dollars per annum, payable in advance. The first number will be issued early in 1838.

☞ All letters, on the business of the Journal, and all communications for it, (the first post paid,) to be directed to the Publishers, Louisville, Ky.

☞ This number of the Journal is sent to some gentlemen who have not subscribed for the work. If they shall determine not to become subscribers, they will please return it to the Publishers through the Post-Office.

PRENTICE & WEISSINGER.

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VOL. I.—NO. 1.

Louisville, Ky.

PRENTICE & WEISSINGER.

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ADDRESS OF THE EDITORS.

The appearance of the first number of the Louisville Journal of Medicine and Surgery has been delayed considerably beyond the period, at which it was promised in the prospectus issued last winter. The delay was owing to a number of circumstances, which it would be uninteresting to its patrons to particularize; it concerns them much more to have some assurance of the regularity of its appearance in future, which the Editors think themselves warranted in giving. We owe an apology to our readers for the space occupied in the present number with matter, which, however interesting to ourselves, embarked in the undertaking of planting a new School of Medicine, is too forensic and local in its character to repay the perusal of such as prize periodicals only for the scientific and practical treasures they enclose, and who look to them for a digest of the voluminous productions of the age.

For a fault so venial, if it attach only to our first number, we expect the ready forgiveness even of such of our brethren, as cannot be presumed to sympathize with our nascent school, and we trust that we shall have no cause to sue for like clemency hereafter. It is the design of the Editors to give a large space to original matter, and they invite communications from the physicians of the

West on the medical topography and diseases of the extensive territory over which they are dispersed. We purpose, also, to give sufficient amplitude to the review department of the Journal to convey to our readers the marrow of new works on medicine, and in the discharge of this branch of our duties we shall not exact conformity to any standard of medical doctrine, which may chance to be in vogue in this or any other school, but shall approve or dissent according as there may appear to be conformity to, or departure from the standard of nature and truth. The same principle will be adhered to in the selections that may be made from other Journals and the communications from correspondents; we shall receive nothing claiming admission on account of possessing a partisan shibboleth, though destitute of substantial merit; nor will we reject any thing, stamped with intrinsic worth, though it may not square perfectly with our own notions. In the triple head that presides over it, indeed, the profession has a guarantee that the Journal will not be pledged to the support of any peculiar or exclusive medical doctrines.

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THE

LOUISVILLE JOURNAL OF MEDICINE AND SURGERY.

JANUARY, 1838.

ART. I.—*A succinct view of the influence of Mental Cultivation on the destinies of Louisville: An Introductory Lecture, delivered at the opening of the Louisville Medical Institute, October 31st, 1837.* By CHARLES CALDWELL, M. D.

Gentlemen of the Medical Class,
and Fellow-Citizens of Louisville:

THE festival of mind which is now in progress, and to whose celebration you are cordially welcomed, has a twofold aspect, and bears relation to a twofold object. It has been specially instituted for the opening and consecration of a new sanctuary of Medicine in Western America. That however, though its primary and immediate, is not its only bearing. It is to be regarded, in its collateral relation, as the commencement of a fresh epoch in the history of Louisville, and its career toward the splendor it is destined to attain.

Of these objects, both of which are so deeply interesting in themselves, and promise to be so important in their influence on society, the former has been already perhaps sufficiently agitated through the medium of the press, and by such other forms of communication and action, as ingenuity could devise, and industry employ. Passing it by therefore, at this time, without further comment, and leaving it to such of my colleagues as may choose to resume it, it is to a brief consideration of

the latter topic that your indulgent attention is respectfully invited. And here let me so express myself as to be distinctly understood.

To remove all doubt from my meaning then, I repeat, that the festival of literature and science in which we are engaged, if improved and carried out as it may be, as I do not permit myself to doubt it will be, and as it certainly ought to be, is the commencement of a new epoch in the history of Louisville, in her progress toward the greatness and renown that await her. For to say that such weight and brilliancy of destiny do await her, is not to speak fancifully, lightly, or thoughtlessly, or to deal in either conjecture, adulation, or compliment. No; it is but to pronounce the conviction of every man of sound mind acquainted with the subject, who remembers the past, examines the present with the attention it deserves, and looks with an eye of discernment into the future. It is in fact but to comprehend and reiterate what nature herself has emphatically pronounced, in forming the splendid locality we occupy. For the works of Nature proclaim her designs, as clearly and forcibly, as would her express revelation of them in words. And every adventitious circumstance bearing on the subject, unites in maturing and hastening the magnificent event—in rearing our city to greatness and renown.

To be convinced that Louisville is destined to become paramount in grandeur among the cities in the northern section of the Mississippi Valley, we need only contemplate the decided and great superiority of her situation. Located on a spacious and beautiful plain peculiarly suited to the purpose of architecture; at the head of deep water navigation, on one of the finest and most important rivers of the world; supplied abundantly with wholesome water; standing in a mild and pleasant climate, and under the action of a salubrious sky; within the limits of a State proverbially denominated the "Paradise of America;" and easy of access to every other State and Territory of the West, constituting in the aggregate one of the most fruitful and glorious regions of the earth—placed under the influence of natural advantages so numerous and pre-eminent, and all co-operating to the same effect, the

attainment by Louisville of greatness and splendor is no less certain than the succession of the seasons, the growth of the palm-tree by the fertilizing stream, or than any other physical or moral event in the unerring and unalterable progression of nature.

Nor are her advantages arising from human action, conceived in wisdom, and pursued with enterprise, industry, and perseverance, to be passed unnoticed. Perhaps such advantages, when carried to their highest pitch, and pushed to their farthest extent, by the resolution and energy becoming great achievements, are even superior to those, however choice and abundant, which nature bestows. In proof of this, they not unfrequently control nature, and subdue her to their purposes. If a few fishermen, aided by an accession of renegadoes from justice, reared Venice, the city of palaces, within the bosom of the Adriatic, and gave to her in time the empire of the seas; and if the comparatively phlegmatic Hollanders erected Amsterdam amidst the mists and bogs of their country, and rendered her famous in commerce and war—if such exploits were performed by inferior agents, under circumstances so deeply inauspicious and discouraging, what wonders may not the strenuous labors of the energetic and enterprising Louisvillians achieve, on the banks of the broad and beautiful Ohio, where all is propitious and tributary to their purposes?—To frame a suitable answer to this question, we must look backward, begin with the past and trace the progress of things to the present. And this retrospect discloses to us, even in these unprecedented times of change and improvement, an amelioration of condition, which it would be scarcely extravagant in me to denominate marvellous.

Forty years ago Louisville was but little else than a stockade fort, and a few blockhouses and cabins, to protect its handful of hardy and heroic inhabitants from the summer sun and the wintry storm; and from the war-weapons of the murderous foe that surrounded them. At that period, and even long afterwards, it was visited only at protracted intervals by a few flats and other forms of row-boats, which slowly descended the current of the river, on a voyage full of hardship

and peril, to a far distant and precarious market, from which, after a long and anxious absence, but few of them returned, freighted with either necessaries or luxuries for the people. Correctly speaking it enjoyed neither trade nor commerce, arts nor agriculture. Its bold and frugal inhabitants subsisted by the rifle and the hunting-knife, which they were compelled to employ against the assaults of the Indian, almost as frequently as against the game of the forest. But, though then unseen, and even undreamt of, other and far different times and scenes were in reserve for them.

The wand of the Great American Magician had not yet been waved over the wilderness of the West, to call forth the entire amount of its fruitfulness and beauties, and to disclose and render available the whole of its resources. Nor, of course, had the Spirit of steam been yet awakened from its slumbers, to move on the face of the rebellious waters of our inland seas and rivers, subdue them to its ends, give them all their destined efficiencies and influence, and render them subservient to the interests of man, far beyond his highest hopes and boldest anticipations.

In plainer terms, the genius of Fulton had not yet gone abroad in its creative potency, to bestow on every portion of our globe, but more especially on the Mississippi Valley, benefactions beyond even the visions of fancy, and the stories of fiction—such, if not greater, than Cadmus bestowed on Greece by the introduction of letters, or Ceres on that and other countries by the establishment of agriculture. This momentous occurrence however was in full embryo, and maturing for birth. And the period at length arrived, when the work was to be consummated—when the genius of him who rivalled in inventiveness the mechanician of Syracuse, began its new and mighty operations, whose issue became, as if by enchantment, the admiration, the marvel and the blessing of the age. For suddenness, extent and durability, the revolution thus produced in human affairs, is without a parallel in the history of our race. A contrast of it with other revolutionary achievements will prove my assertion.

The overthrow of the Roman empire was the parent of effects that had their days of wonder, and their centuries of in-

fluence. The Reformation and the Invention of printing were also the wonder and the hope of their time. And, at a later period, the sword of Napoleon demolished crowns and sceptres, subverted old dynasties and erected new ones, and changed the current of thought and events, in some of the most proud and powerful nations of the world. Two of these three however were comparatively limited and ephemeral occurrences. Nothing in them savours of earthly ubiquity, or endless duration. But not so with the creations of the genius of Fulton. When all the direct and immediate effects of the other two great revolutions just referred to shall be scarcely recognised, and the revolutions themselves shall be but matters of history—even then shall the influence of steam, as directed and applied by our departed countryman, be not only displayed in new modes of action and issue; it will be more sublime in its manifestations, and far more abundant in its contributions to human power, convenience, and felicity, than it is at present. And of the benefits arising from it our city has experienced its full proportion; if it has not profited by them in an unequalled degree.

In proof and illustration of its mighty gain from this source of improvement, what is Louisville *now*, in contrast with what it was at the period referred to? In most respects, I reply, as directly and strikingly the reverse, as words can express, or fancy conceive. It is now a large, populous, and flourishing city; flush and vigorous in commerce and the arts; free from the dangers of an insidious foe; abounding in wealth, and bounteously provided with all the necessaries and comforts, luxuries and elegances of a life of enjoyment; while its wharves are crowded with steam-vessels, some of them the most splendid and magnificent in the world, which, in their swallow-like passages to and from the remotest ports and places, set at defiance the stream and the wind, and in their operations, as if instinct with supernatural power, pour into its lap the productions of every quarter of the globe.

Such are the astonishing changes that have occurred, perhaps within the memory of some of those who honor me with their presence; certainly within the memory of many of

the present inhabitants of our city. And they are but an antepast, probably a faint one, and a certain premonition, of still further and greater changes that lie buried in the future.

From the tenor of these remarks it is obvious, that the career of Louisville has been already marked with what may be justly regarded as two distinct ages; the age of danger, war, and heroism; and the age of security, commerce, and the arts. Nor does aught now present itself to discourage the belief, that the latter will endure, as long as the earth shall continue fruitful, the arts be cultivated, and the waters shall flow, to be the bearer of their products.

As heretofore suggested, another age in the progress of Louisville is now commencing, destined, I doubt not, to be much more august in its nature, and glorious in its effects, than either or both of the other two. It is the age of MENTAL CULTIVATION.

Here again I must carefully guard myself against misapprehension. I do not say that mental cultivation, in its whole extent, has been hitherto entirely wanting in our city. Far from it. The intelligence, sagacity, and successful enterprise of our merchants, the taste and ingenuity of our artisans, the ability and attainment of our lawyers, physicians, and divines, and last, though not least, the sound sense and well developed powers of conversation, music, and other polite and elegant accomplishments, of no inconsiderable portion of our female society, prove the contrary. But, as relates to *science* and *letters* in the usual acceptation of the terms, Mental Cultivation, especially that of domestic growth, and as connected with the youth of the place, *has been wanting* in Louisville far beyond what it ought to have been, and, of course, beyond what is creditable to the city. In more direct and pointed terms, we are grievously deficient in schools of instruction. Literature and science have not been duly honored and patronized by us. Let Louisville be compared in this respect with any other city in the United States of like size and opulence (New Orleans alone excepted,) and even with many of much humbler standing, and the issue be marked. The contrast will be found striking, and far from

being flattering to us. It will be seen that in respect to institutions for Mental Cultivation, Louisville is most humiliatingly in the rear—in the rear of Cincinnati, Nashville, Oxford, Bardstown, Bloomington, Charlotteville, Columbia, Athens, Tuscaloosa, and of many other towns and even villages greatly inferior to it in size, as well as in wealth, influence, and fashion. Even a small circulating library has been recently closed in this city for want of patronage. Nor have we any well sustained Lyceum, or other form of meeting, professional or popular, designed for the purpose of intellectual improvement. Hence the mortifying and discreditable fact, that the youth of Louisville, female as well as male, are sent to other, many of them to distant and obscure places, to receive their education. Thus are they separated from the guardianship of connexions and friends, and from the hallowed sanctuary of the parental roof, at the most critical and trying period of life, when the protection of HOME, next in sacredness and beneficence to that of HEAVEN, is most needed by them, and surrendered up to the cold, self-interested, and heartless keeping and discipline of strangers. This is an evil that may well be called grievous to the youth who are the subjects of it; and in the parents, guardians, and the entire community, who tolerate its existence, it is an inexcusable fault.

There are few seats of learning of respectable note, either east or west of the mountains (and some of a very inferior caste might also be specified) to which the youth of this city do not occasionally resort, in quest of some share of Mental Cultivation. Nor is this long continued dependence of ours on other cities, towns, and hamlets, for the benefits of education, suffered by our enemies to pass unnoticed. Far otherwise. Our slumbering condition on that subject, so important to our interests and so vital to our standing, is commented on by these malignant taunters, in a spirit of affected contumely and embittered sarcasm. How, say they, can a medical institution of any respectability be reared and sustained in a place, which is destitute of good common schools for boys and girls! Let the proud, all-grasping city of Louis-

ville make provision first to educate *her own youth*, and then, but not before, she may have some pretension to educate the youth of other places. Let her remove the beam of illiteracy from her own eye, before she attempts to extract the mote from the eye of her neighbor. Let her make it appear in practice, that she has stores of literature and science sufficient for her own domestic use, before she invites the community to partake of them!

I do not say that these rude and malicious jeers have been hitherto deserved by us. They are much more, I doubt not, the product of malice and envy, than of a disposition to award justice, or express truth. But I *do* say that they *will* be deserved—richly deserved hereafter, should our present destitution of schools, both high and low, be suffered to continue. All the means requisite for the erection and maintenance of literary and scientific institutions of every description are here; and not to employ them, and appropriate them to their uses, will be matter of deep and lasting reproach to us.

Does any one who hears me distrust the importance of the subject I am discussing? does he doubt for a moment the surpassing value of Mental Cultivation? Does he waver in his conviction that it is immeasurably superior to every other element of human felicity and greatness, splendor and renown? and that an age of Mental Cultivation will be far more ennobling and glorious to Louisville, than all that has preceded, and all that can accompany it? And does he, under this impression, feel and manifest a cold indifference toward its introduction and encouragement?

If such be the case, and any listener honestly doubts and acts to this effect, let him look into the histories of all times and all countries, and be convinced of his error. Let him thus inform himself of the wonders of greatness, beneficence and enjoyment, which the world has experienced from the *presence* of Mental Cultivation, and of the dark, deep, and dismal disasters its *absence* has inflicted. Let him make this examination thorough and searching, and he will find that the *former*, has been the highest ornament and blessing of our

race; while the *latter* has brought down on it its most ruinous catastrophes—such scenes of havoc, as the butcheries of the savage, the brutal, and the fanatic, the conflagration of cities, the desolation of countries, and the downfall of nations.

Why is now so little known of the real grandeur and magnificence of Babylon, believed to have been, in her meridian brightness, the mistress of the world? Why would the once mighty and resplendent Palmyra be wholly forgotten, were it not for her spacious streets and avenues, which attract the gaze and wonder of the traveller, her massy and extensive but crumbling walls, her broken arches, and dilapidating columns? Wherefore are we entirely ignorant of the once renowned Persepolis and Heliopolis, and almost equally so of Thebes with her hundred gates, Tyre and Nineveh with their surpassing beauty and opulence, and Carthage so unrivalled in commerce, and so terrible in arms? And wherefore is the Imperial mightiness of the land of Sesostris, the Pharoahs, and the Ptolemies so dimly seen in the distance of time, only through the magnitude of her pyramids, the massiveness of her temples and obelisks, and the shadowy and mystical gloom of her catacombs? Finally, why is so little known of Africa, Oceanica, and many parts of Asia, with their thousand nations, their wars, conquests, migrations, rise and subversions, and of the once powerful empires of Mexico and Peru? To these several questions the answer is easy; and to each of them it is the same. In the places referred to Mental Cultivation, the great and only orb that Heaven has hung on high, to dispel from some of them primeval darkness, and to rescue the others from the night that had descended on them, was deeply deficient, or entirely wanting. Its presence would have redeemed them—effectually redeemed them from the dark and dreary destiny that has befallen them.

Wherefore is it again, that, at the distance of more than twenty centuries, the glories of Greece, a mere speck on the surface of our globe, not only survive in undiminished lustre, but still serve as objects of intense admiration, and unrivalled sources of instruction and delight, to all civilized and

enlightened nations? And why is the earthly omnipotency of ancient Rome more brightly emblazoned, and set forth in bolder and more imperishable relief, by the labors of her poets and historians, orators, and artists, and other men of literature, science and taste, than by all the fields of carnage where she triumphed in battle, and all the countries she desolated in war? And, as an individual instance, why is "imperial Cæsar" himself immeasurably more glorified by his pen, than by his sword?

These questions again are easily answered. In addition to their ages of heroism and commerce, Greece and Rome had also each its age of Mental Cultivation. And it was the latter that gave to their grandeur and glory a never-dying lustre, and bestowed on them a renown that promises to be as lasting as their mountains and streams. Without claiming the license of poetry or rhetoric, I might perhaps say *more "lasting."* The Mount Ida of the Iliad surpasses in beauty, and towers in grandeur far above, that which presents itself to the eye of the Ægean mariner; and while the Simois and Scamander can scarcely be traced by the classic traveller, they roll in full and living streams, now of crystal, and now of blood, along the pages of Homer. And while the Soracte and the Tybur of *ancient song* are justly held in admiration and delight, those *of modern reality* are objects of comparative disregard and indifference. Even the lake Avernus, which the Æneid has portrayed in lineaments of awe, and rendered an object of fearful sublimity, is now passed unnoticed by the Italian tourist. While the great achievements of other ancient nations therefore are hopelessly reposing in the tomb of forgetfulness, for want of practised pens to redeem them, those of Greece and Rome are secured from the conquest and dominion of time, and dispread throughout the world in renovated splendor, by the multiplied expedients of Mental Cultivation.

Descending to the period of the "Dark Ages," let us put three questions more, and mark the issue. What was the cause of those 'Ages?' Why was a name so significant bestowed on them? And what brought them to a close? Nor can any questions be more easily resolved.

The "Dark Ages" proceeded from the extinguishment of all the intellectual lights of the time, by hoards of Barbarians, who were as utter strangers to Mental Cultivation, as the fiery chargers that bore them into battle; or as the domestic flocks and the game of the forest on which they subsisted; and who took a savage delight in trampling under foot the choicest productions of that condition of the human mind. And the reason why that period of gloom and licentiousness was called the "Dark Age," was because Mental Cultivation, with its lights and benefactions, refinements and blessings, had been mercilessly assailed, and, at one unsparing sweep of Vandalic desolation, buried under the ruins of its own productions. In reply to the third question it is perhaps superfluous to say, that the night of the "Dark Ages" was terminated by the *re-rising* of the sun of Mental Cultivation, as it had been brought on by the *going down* of that glorious luminary. In proof of this, the dawn of a coming and a brighter day first broke on Italy, over whose horizon that orb was first ushered to sight, after its numerous and heart-withering centuries of absence.

A further descent down the current of time brings us to our own *general* epoch. And this, in many portions of the globe, is much more emphatically than any former one, the age of Mental Cultivation. In the aggregate, the civilized portion of our race is, in most respects, very rapidly improving. Though I have admitted that Greece and Rome were enlightened far beyond their contemporary nations, and that on some points they furnish models of imitation, and sources of instruction even to the modern world, I do not admit that with them Mental Cultivation attained the same lofty height and resplendent polish which mark it at present. Far from it. Compared to the intellectual condition of the present epoch, the meridian splendor of ancient Greece and Rome was *a dark age.*

The admiration and homage bestowed on the mental standing and performances of the Greeks and Romans are pre-eminently extravagant. With many persons they are hardly short of idolatry. And, like other forms of idolatry,

they are founded in error. It is not true that the ancient orators, poets, and other men of letters surpassed those of modern times. In richness and variety, argumentativeness, power, and brilliancy, they were inferior to them. And in delicacy and refinement of manner and thought, they were still farther inferior. I fearlessly assert, that, in the literature of Greece and Rome, nothing has descended to us equal to what enriches, and is destined to immortalize, the literature of the Anglo-Saxon race. In this sentiment I know that I stand in a meagre minority, public opinion being overwhelmingly against me. By that consideration, however, I am not moved. The decision of correct taste and sound criticism does not depend, like the fate of popular elections, on the mere *count of heads.* I know equally well, that on this topic public as well as private opinion is in many cases warped by feeling, prejudice, and authority, and in many others by affectation and pretence. I have known scores of pedantic college-bred youths to hang in counterfeit raptures over Homer's Iliad, and descant, with the confidence of modern Longinuses, on its grandeur, sublimity, and beauty, whilst they were unable to translate it. And I have witnessed affected scholars displaying the same senseless admiration of the works of Virgil, when they could not perhaps render into sound English the first line of his first Bucolic.

The true grandeur and glory then of the most powerful and distinguished modern nations arise, not from the extent of their commerce, or their superiority in arms; they are chiefly the growth of the resplendent age of Mental Cultivation, which it is their fortune to enjoy. This is especially the case with Great Britain, France, Germany, and the United States. With Russia, Italy, Spain, Holland, Belgium, and other nations of Europe, and all those of Asia, it is the case in a different and an inferior degree.

What Mental Cultivation has already done for Greece and Rome, it may do hereafter for several of the modern nations just referred to. Like some of the once populous and far-famed countries of the east, Germany may yet be reduced to a desolate waste, and be no longer the home of science and

letters. The sceptre of France may be broken, her military prowess and chivalry may pass away, and every trace of her arts and manufactures be effaced. The trident may be wrested from the grasp of Great Britain, and her manufactures, commerce, and wealth be transferred to other powers. And the stripes and stars of the United States may grow dim, and no longer sweep, a meteor-light, through the heavens, to awaken the slumbering nations to the assertion of their freedom—in the great and ever-varying current of events, these overwhelming changes may occur; but German, French, and English literature shall be as lasting as our globe. The ravages of time, under which the mountains crumble, and the ocean itself is altered in its limits, will be unable to destroy it. And it will tell the story, and perpetuate the remembrance of the nations which produced it, when those nations shall be but names; and when all their other memorials, with that which they would commemorate, shall be speechless and forgotten.

Such is the earthly omnipotency of Mental Cultivation, and such the indestructible nature of its effects. And, I repeat, that, in its true and efficient character, it is now commencing in the city of Louisville. A few remarks on the mode of introducing, directing, and establishing it, and on its opera tions and results, shall make up the remaining portion of my discourse.

Children constitute the basis of our population. Their education therefore should constitute the basis of the education of our city. And it should begin at an early period of life. I do not however mean that it should begin *in infancy.* Infant schools, unless arranged with more wisdom, and administered with more intelligence and skill, fidelity and carefulness, than is usual in such establishments, are a serious evil. I do not however maintain the absolute impossibility of so reforming and improving them, as to render them beneficial. Yet I do maintain that such a change can be effected only by those, who have a thorough and practical knowledge of human nature, in its organic and physical, no less than in its moral and intellectual capacity. But both time and the occasion forbid my discussion of this subject at present.

The order of schools to which I have alluded should contain no children under the seventh or eighth year of their age; and their studies and exercises should be carefully adapted, by competent judges, to the developement of their faculties, and the condition of their minds. I say, by "competent judges;" and none are such, who have not a sound and comprehensive knowledge of mental philosophy. And, at the present day, such knowledge is not possessed by *one* teacher of children *in every ten thousand* of those, who are engaged in that business. Hence the work (one of the most arduous and responsible that man can embark in) is so miserably performed. While few other tasks require, for their due performance, a greater amount of human sagacity, skill, and wisdom, that task is too generally committed to a class of pedagogues, whose ignorance and illiteracy are equalled only by their obstinacy and conceit.

No study of an *abstract nature* should ever be assigned to pupils, while under their twelfth or fourteenth year. Their faculties for such an exercise are not yet developed. Not only therefore are they incompetent to it; their health is likely to be impaired, and their hopes and ambition to be depressed by the effort. The task being difficult beyond their powers, failure in it is certain; and mortification and an aversion from study are its usual concomitants.

As respects the education of children at this very interesting period of life, the entire process (principles as well as practice) is summed up in the precept, "Rear up a child in the way he should go, and when he is old he will not depart from it." A most important question then must be proposed and answered—what *is* the way in which man should "go," and to which he should be effectually trained by education? I reply, that he should walk in the light of *knowledge*, and in the straight path of *morality*, in the most comprehensive sense of the terms; which, as I would interpret them, embrace religion in practice, as well as in sentiment. Without pure and inbred morality, no one is truly religious; and possessed of such morality, no one can be justly pronounced irreligious. Be his doctrinal opinions what they may, his practical views

and sentiments will be correct and sound, and his conduct, in all his social relations, will be upright and honorable. He will do justice to all, as far as may be in his power, and intentional injustice and injury to none; and toward those whom he believes to be rightful objects of them, he will exercise benevolence and generosity, charity and mercy. And these are some of the most essential requirements of religion. He who performs them from proper motives, thus doing to others, as he would that they should do to him, discharges some of the most acceptable duties to his God.

Such then is the import I would attach to Mental Cultivation, which I have referred to so often, and so highly commended. It is not the cultivation of the intellect alone. It consists in the correct and efficient training of *all* the faculties of the mind—the *animal* and *moral*, as well as the *intellectual.* In general however the *former* must be trained in the *reversed* order of the *two latter.* The animal faculties, when in excessive or disordered action, are the sources of vice. In the process of education, therefore, they must always be sedulously watched, generally restricted in their exercise, and not unfrequently diminished in their strength. In this way they are reined in, and withheld from vicious excesses. On the contrary, the correct cultivation of the intellectual and moral faculties consists in the augmentation of their activity and vigor. And this condition of them is produced by suitably and skilfully exercising them, each on its own appropriate subject, and in the way its peculiar constitution requires. The intellectual faculties must be exercised on intellectual subjects alone, and the moral faculties on moral ones.

It may be a sufficient illustration of my meaning in this place to say, that the faculty of Language must be exercised on languages, the faculty of Causality in tracing and developing cause and effect, the faculty of Conscientiousness in doing justice and sanctioning and defending right, the faculty of Benevolence in acts of kindness, charity, and mercy, and each of the other faculties, in like manner, in its own individual and specific line; no one of them being capable of

action in the line of another. In this way alone can they be cultivated and strengthened; and in this way alone can education be conducted to any efficient and satisfactory result. But interesting and important as this topic is, I cannot dwell on it, the want of time forbidding its discussion.

As respects schools for children, the greatest evil I say (and it pervades the Union, being much worse in some places than in others) is, that teachers are employed, who are utterly incompetent to the duties of their station; whose ignorance and illiteracy require that they should be themselves at school, to receive instruction in the very elements of letters. It is matter of notoriety, as deplorable as it is pernicious, that, in a majority of cases (it is believed a very great majority,) teachers of children engage in the work, not because they are *fit* for it, but because they are *unfit* for any thing else. And it is further notorious, that the parents and guardians of children, in their employment of teachers, make their selections, not so much on the ground of the *highest qualifications*, as on that of the *lowest charges.* A competent teacher is rejected, because his price is *liberal;* while an ignoramus is selected, because *his* is *low*—because perhaps he is in a starving condition, and willing to work for his food and clothing. Thus is the education of children ruined, and they themselves injured for life, from motives of what are called *economy* and *prudence;* but of what in reality are deep indiscretion and miserly meanness. Strange and even unnatural and incredible as it may perhaps appear, it is notwithstanding true, that men who pay liberally in all other purchases, often higgle and huckster in making terms with the individual who is to instruct their children, and to act a most momentous part in the formation of their characters—and often in casting their destines for life. In a word; from the immense importance of the duties confided to them, and the almost boundless influence of their labors on society, the rank, as well as the pecuniary reward of the instructors of children, is greatly below the level they should occupy. As already intimated, there is no class of men, the effects of whose labors on the community, for evil or good, are more extensive, powerful, and permanent,

than those of the teachers of the rising generations. Yet is the income of such persons greatly below that of the itinerant pedler, the vender of nostrums, or the retailer of drams! This is an evil which calls aloud throughout the land for a radical reform. And it would rejoice me exceedingly, were the reform to commence in the city of Louisville, which, in another scheme of improvement, has recently set so resplendent an example. How glorious and praiseworthy would be the act in itself, how noble in its bearing, how powerful and awakening in its influence, and how lastingly beneficent in its effects, were this youthful city, whose site, but forty years ago, was overshadowed by its primeval forests, to redeem from the tyranny of custom, and the injustice and unmerited neglect of ages, the teachers of children!—To return from this digression.

Let this age of mental cultivation then, in the city of Louisville, be ushered in by the establishment of a *complete system* of schools for all classes of its inhabitants not already educated; those for the instruction of children, as already mentioned, and as the nature of the case requires, forming its basis. And that they may constitute a "system," the schools should be modelled after each other. They should at least so far conform to a common scheme of instruction, as to co-operate with each other in the general result. Under such an organization, the pupils of lower schools may, at the proper period, be transferred to higher ones, without any injurious or embarrassing derangement in their modes of study.

Under the present isolated and disjointed schemes of instruction, this advantage is unattainable. When, in the present condition of things, pupils are removed from a lower to a higher school, greatly to their annoyance and discouragement, their old habits of study must be broken up and abandoned, and new ones no better, perhaps even worse, acquired, at no inconsiderable expense of time and labor. And thus is often created in them an aversion from schools of every description; and thus is their progress in letters retarded. Such are the evils of a want of sound principles and harmonious co-operation in the education of youth.

Be it distinctly understood, that the system of instruction here recommended should embrace schools for girls, as well as boys. Did time and the occasion permit, it would be easy to show, that sound female education, carried to the proper extent, would prove the best basis of education for the whole community. The reason is obvious. Mothers who are competent to their duty, and faithful in the discharge of it, are immeasurably more efficient in forming the characters of their families (of sons as well as daughters) than fathers are, or can be, whatever may be their desires and exertions to that effect. Nor is it possible for hired teachers, however able and faithful they may be, to equal the moral influence of competent and devoted mothers, in giving purity to the characters and value to the conduct of those they instruct.

To carry out this system, and bestow on it its full efficiency and power, I need hardly remark, that four other grades of institutions are requisite. These are high English schools—academies where Greek and Latin (if included in the general scheme of instruction) with French, Italian, and other modern languages are taught—colleges, in which youth are instructed in still higher branches of physical and moral science—and universities, where professional knowledge is imparted. And institutions of these several ranks, under the direction of a sufficient number of able and distinguished officers, it belongs, in an equal degree, to the pride and ambition, the patriotism and interest of Louisville to possess. And if she does not possess them, there is reason to believe that the highest grade of them is lost to Kentucky, at least for years, if not for ever. *Transylvania is a ruin.* For want of the necessary means of instruction, it is impossible for her medical department to be maintained. It may drag out, for a year or two longer, a forced existence discreditable to its officers, and unprofitable to those who may be *artfully seduced* to become its pupils; but its fall and evanescence are no less certain, than are those of the *sand-founded house*, and the *air-built castle*. On the drama (I *might* say the *farce*) of the college

department of that university, which has feebly and almost uselessly struggled on for years, the recent resignation of President Coit has dropped the curtain; nor does a hope perhaps remain that it will ever be relifted. One thing is certain; it can never be relifted to any useful effect, without a very large pecuniary endowment, and an entire revolution in the administration and economy of the whole establishment. To render that institution what it ought to be, as a State university, *one hundred thousaud dollars* would be a very *meagre* and *insufficient* endowment. And there is no probability of its ever receiving from the State of Kentucky the fifth of that sum. In a special manner; while the pupils of the college department of Transylvania continue to live in the families of Lexington, the institution can no more flourish, than the earth can be fruitful without sunshine or rain. They must be so accommodated as to live by themselves in a separate community, and under true college government, else they will never acquire the habits of study, and the *esprit du corps*, necessary to imbue them with scholarship and science. In this remark, I but reiterate the sentiment I have entertained and expressed for the last ten years. And all experience, and all time will proclaim it to be true.

Of the law department of Transylvania I shall only say, that one of higher character, brighter promise, and more extensive usefulness can be easily erected in this city. The superior means at our disposal insure the end. For this opinion I could give cogent reasons, did not delicacy forbid me. Nor will aught but a want of knowledge, or the selfish and sinister passions of a few individuals deny the position.

That other college institutions, of which I may not speak disparagingly, exist in the State is true. But it is equally so, that they are totally insufficient for the wants of the State. They do not possess the confidence of the people. Of this we have ample proof in the fact, that our youth are not retained at home by them, but resort in numbers, as heretofore stated, to other colleges, remote or neighboring, as circumstances direct.

Of the great and growing family of western States, Kentucky is the elder sister. On all points of high improvement therefore, especially where Mental Cultivation is concerned, it is her duty, and ought to be her pride and resolution, to move in the van, and set a lofty and becoming example to the others. Has she done this in the character of her college institutions, and in her general arrangements for the advancement of education? or if she has ever done so, is she doing it now? Far from it. Scarcely superior on these points to the youngest of her sisters, she is not a little inferior to four or five of the elder—to Tennessee, Ohio, Indiana, Alabama, and possibly even to Illinois. Nor do I perceive at this moment but one way of removing the evil—I was near saying the *disgrace*, which has so grievously come down on her. This city must come to the rescue of *general education*, especially of that of a high order, in her parent State; else the prize is lost—and that for a period whose termination is undiscoverable. She has the power to rescue, which no other circumscribed community possesses. And unfortunately the State at large does not seem to possess the disposition. This truth is but too clearly and satisfactorily established, by the annual events of the last eighteen or twenty years. The Commonwealth is not in the spirit of endowing and maintaining a great seat of learning. On that point the last ray of rational hope appears to be extinguished—at least for the *present;* while an unexplored and unpromising *future* stretches out before us.

Under these circumstances, so momentous and vital to our welfare as a people, the duties which Kentucky and Louisville owe to each other are plain and imperative. It is the part of the latter to petition, or in some other way solicit the former, through the wisdom of her Legislature, to charter an university, to be located here; and it belongs to the former to grant the request without hesitation. Nor will she, can she hesitate, in a matter so important to the interest, pride, and character of the State. Even to doubt her compliance, in a case of such urgency, where every

high and praiseworthy consideration invokes her to the act, might well be received by her as an imputation injurious to her *patriotism* and *honor*. For they are both essentially involved in the issue. Unless something effectual be done by education to protect it, the State will be shorn of the radiance it once possessed, its standing will be lowered, and its pride and patriotism will jointly mourn over the mortifying occurrence.

Though the native mind of Kentucky is unsurpassed by that of any other people, it cannot compete successfully with cultivated mind, if *it* be not also improved by cultivation. And cultivated sufficiently it cannot be, unless at least one great and well-administered literary institution be maintained in the State. To attempt to reach the end desired, by sending a few of the youth of our State to receive their education in distant colleges, is to trifle with one of our weightiest interests, and most sacred trusts. The effort must inevitably lead to disappointment and exposure, both mortifying and injurious. Nor is this all. The number of young men, who can be thus educated abroad, will be very limited; and they will necessarily consist of the sons of the wealthy. Men in moderate and straitened circumstances, from whom emanate many of our most distinguished characters—our Clays and Websters, Wirts, Pinckneys, and Harpers—will be unable thus to educate their sons. Hence will the community be deprived of the services of individuals, calculated by nature to become its brightest ornaments and greatest benefactors. And in this way will be created, what is so often referred to in terms of deprecation and deep reprobation, and with feelings of dread, AN ARISTOCRACY OF LEARNING, in the true and most exceptionable meaning of the expression. The evil however, I say, in all its bearings, can be easily averted by the aid of an university; but by no other expedient which at this moment presents itself.

Let the institution referred to be erected I repeat, in this city; and let it consist, as is customary, of at least four grand departments; a department of literature, philosophy, and the arts; a department of medicine, and the sciences collateral to it;

a department of law in its several divisions; and a department of theology, including *natural* religion, as well as *revealed*—let such an institution I say be chartered, and established in this place, and the work will be done. Kentucky will be no longer dependent on other States for the education of her youth; the poor of them as well as the wealthy may be educated indiscriminately; nor will she be drained of her resources to defray their travelling and college expenses. On the contrary, she will soon become the educator of the youth of her sister States, and the participator in their wealth, for the services rendered.

Is any one inclined to ask, why Louisville should be selected, in preference to other places, as the favored emporium of education and letters? The reasons, I reply, are numerous and cogent.

The experience of all time has taught us, that without a competent endowment, a literary institution of the highest order cannot exist. Funds are as essential to it, as water, soil, and sunshine to the growth of plants, or as atmosphereic air to animal life. But, as already represented, years of persevering trial have proved, that Kentucky, as a State, will not furnish those funds. Be the cause what it may, there is at present no shadow of prospect, that she will competently endow a STATE INSTITUTION. But no town or city in the Commonwealth, except Louisville, has the ability to endow. Lexington has not, as the experiment has shown. She has once or twice agitated the matter, made a feeble effort toward its accomplishment, and entirely failed. Danville, Georgetown, and Augusta, the seats of small chartered institutions, are unequal to the task, and do not even dream, it is believed, of attempting it. Of all other places in the State, I repeat, Louisville excepted, the same is true. They want the means to endow and maintain a distinguished institution. Nor, under their conscious destitution of the ability, do they cherish either the ambition or the desire to that effect. Of Louisville very fortunately the reverse is true. She *has* the means; and the ambition and desire, I am confident, accompany them. She is solicitous to employ her resources for the common

benefit of her parent State. Nor does her praiseworthy ambition terminate here. She feels, I have reason to believe, her interest, pride, and duty alike concerned in the great enterprise of establishing and maintaining a seat of science and letters, not alone for her own benefit, and that of Kentucky; but for the benefit of the West; and not alone for the present time, but for centuries to come.

Another reason why Louisville should become an emporium of education, in preference to other places in Kentucky is, that, from the present extent of her population, and the rapidity of its increase, she already has, and will continue to have, from her own resources, a much larger body of youth to be educated, than exists in any other locality in the State. And if they be not educated within herself, a large proportion of them will not, and cannot be sufficiently educated at all. A few years hence, and her own youth will be sufficiently numerous to fill up the classes of the college department of an university themselves. And even to the other departments their supply will be considerable. Nor is all yet told.

For a great and commanding university, Louisville is by far the most favorable situation in the Mississippi Valley. Her easy and uninterrupted accessibility to a country abundant in means and of vast extent, populous already, and becoming daily more so, is without a parallel in the western States. Of all parts of Kentucky, with her seven or eight hundred thousand inhabitants, and an immense amount of wealth more equally distributed among its possessors, than in any other tract of country perhaps on earth—of the whole of Kentucky, thus abundantly provided with population and opulence, her roads and watercourses, the facility of passing along which is constantly on the increase, will soon convert Louisville into the literary home.

With New Albany, Jeffersonville, and Madison, three towns of high respectability and ample promise, and with a large portion of the great State to which they belong, our city may be said to be virtually in contact. To them therefore her proximity alone would render her their chosen seat of high education. The lower Ohio and Mississippi, whose

navigation is rarely if ever interrupted, and their tributary streams, create for her a close and unbroken connexion with all the States to the west and south of us. And by the upper Mississippi a ready passage is afforded from Missouri and the Wisconsin Territory. From all those places therefore, with several others which I forbear to name, would a well administered and splendid university in Louisville become the resort of pupils.

A further consideration, of no small moment, will draw to an institution in this city abundant patronage, especially from the States of the south, and from Missouri. In manners and customs, habits, sentiments, and modes of business and general deportment, the people of Louisville are closely assimilated to the people of those States. The same warmth of feeling and open-hearted hospitality, the same liberality of disposition and thought, and the same manly frankness and chivalry of spirit pervade and characterize the whole. Nothing of a soul-chilling tendency, or of a narrowing and restrictive influence will be here brought to bear on the youth who may resort to us from those regions, for the purposes of education. They will experience here the congenial action of the same moral atmosphere and climate, under which they have been reared. While receiving intellectual education therefore, they will be also educated *socially* in the most efficient and acceptable manner. Their views of life will be in no way unfitted for their future destinies. In a special manner, *they will receive no sinister and perverting impressions respecting any of the domestic institutions of the south.*

The scenes and operations moreover of a large city are peculiarly calculated to expand and liberalize the minds, elevate the views, and invigorate the enterprise of those who mingle in them; while the limitedness of all things in a *little village* tends inevitably to narrow down to its own dimensions the actions and thoughts of those who experience its shrivelling influence. So certain is the human mind to conform to the character of the external circumstances, whose impressions it receives. And among the various elements that enter into the aggregate of the education of youth, these

are matters of much more importance than is usually attached to them—Further and more clearly to illustrate my views of this interesting subject.

It is of much higher moment than it is generally supposed to be, that while the intellects of the youthful are expanding and improving under the influence of education, their moral and social characters should be so modelled, as to be fitted for the theatre where they are afterwards to appear, and for the particular sphere of action which awaits them. Success, respectability, and happiness in life, depend much more on fitness of feeling and sentiment for the station occupied, than on any abstract condition the intellect can receive. It is for want of its tendency to impart this moral and social fitness, that an European education is so signally unsuitable for American purposes. If a young man be first educated at a college in Great Britain, he must be educated afterwards in American society, before he is fit for American affairs. Of this remark, all experience confirms the truth.

It is high time then that the tide of young men, which has been so long flowing from the south to the north in quest of education were arrested; and that the object sought for were furnished elsewhere, in a more suitable place, and under better influences. For it is a conceded point, that the education received in the northern and eastern States, by the youth of the south, is, in a vast majority of cases, superficial and flimsy, inappropriate in many respects, and rarely productive of salutary effects. The force of this truth has been highly influential in erecting universities and colleges in Virginia, the two Carolinas, Georgia, Alabama, and Tennessee. And strenuous efforts are now on foot, to give greater breadth and variety, depth and power to the operations of the Tennessee institution, and thus render education in it more thorough and extensive. It is to be deeply regretted, however, that so important an example has been slighted or neglected by the State of Kentucky. But for the honor and patriotism of Louisville, and for the benefit of herself, Kentucky, and her southern and western connexions, I earnestly trust that it will be duly appre-

ciated, and wisely and efficiently acted on *by her;* and that ages to come will rejoice in the issue of the salutary measure.

Another point of interest invites Louisville to render herself an emporium of *general education*—education I mean for younger classes, as well as for older; and for females as well as males. The useful and profitable effect of such an arrangement will be twofold. It will not only attract *pupils* from the south; it will also induce their parents to pass a large portion of the year in our city and its neighborhood. Many of them will become the purchasers of town and country residences; their abode here will grow permanent; family alliances will be formed by them with our own citizens; and thus will the wealth, population, and influence of the place, and its favorable standing with other places, be greatly increased. And of this state of things, an improvement in social elegance, refinement, and taste will be the necessary concomitant. To these several points of interest and usefulness to our city, I need scarcely add, that the Medical Institute will abundantly contribute.

Such are some of the splendid prospects unfolded to us by the opening age of Mental Cultivation; and such its propitious influence and aggrandizing effects on the city of Louisville. Not however I repeat on Louisville alone. That view of the subject would be narrow and ignoble—unworthy alike of the epoch and ourselves. The events contemplated rise far above, and extend equally beyond, the restricted sphere of local selfishness. States and Territories already peopled by civilized millions, and regions still trodden only by the foot of the savage, and the prey he subsists on, will feel and acknowledge the ameliorating change. And, instead of being limited in its effects to ourselves and our contemporaries, the great and felicitous event, expanding and deepening in its stream of consequences, like the peerless Mississippi in its descent to the ocean, will reach the bourne of the remotest posterity.

Is any one inclined to pronounce these anticipations eutopian and visionary, and the improvement predicted ex-

travagant and impracticable? I tell him distinctly he is a stranger to the subject. Having never thoroughly examined what enlightened and resolute mind can achieve, he is disqualified to calculate and fathom the mighty effects of Mental Cultivation. And I tell him further, that a calm retrospect of what similar institutions have done in other places, puts the seal of *reason* and *judgment*, not of *conjecture* and *hypothesis*, on all I have uttered. My calculation is directly from *cause* to *effect*—from what *has* been done by given agencies, to what similar agencies may do again.

Might I be permitted to refer to an occasion not unlike the present, in whose celebration it was my fortune to participate, I might perhaps employ *that*, without impropriety, to shield myself from the charge of present eutopianism. At the opening of the medical school of Transylvania, eighteen years ago, I delivered by appointment an Inaugural address in behalf of the Faculty. To those who listened to me on that occasion, the predictions I made, as to the issue of the enterprise, appeared so extravagant, that many pronounced them the fanciful anticipations of an overheated enthusiast; if not the chimerical visions of a dreamer. Those predictions however were committed to the press, and may now be examined. And the severest scrutiny will show, that from the boldest to the most moderate, *not one of them has failed*. On the contrary, not only have they all been realized; in each one of them the issue has surpassed the calculation—in several of them, in an extraordinary degree. And, though it is highly improbable that I shall take part in earthly concerns eighteen years hence, many who honor me with their attention *will*. If such individuals then (supposing the scheme of an university in this place to be carried into effect) will do me the favor, perhaps I might say the *justice*, to remember at *that period* my predictions *at this*, I have no apprehension of their refusal to acquit me *then* of any extravagance they may impute to me *now*. I shall only add under this head, that a change of circumstances, men, and measures, has precipitated the school of

Transylvania, with a ruinous crash, from the proud elevation to which industry, talents, and energy had reared it.

Will another barrier to the accomplishment of my anticipations be erected on the supposition, that the Legislature of Kentucky will not grant a charter to a Louisville university? That supposition, I reply, is not only groundless; the admission of it, as heretofore intimated, is a wrong, if not an insult, to the good sense and patriotism of the State. Were Louisville to solicit of the Legislature funds to erect and endow an university, the boon might be refused. Or, were there in existence a State university sufficient for the purposes of State education, and were that institution in danger of being injured by the chartering of a Louisville university; even on that, though a much weaker ground of objection, the charter might be withheld. Or if any other State or general interest were likely to be in any way marred or jeopardized by the measure, on that plea also the Legislature might be justified in denying a charter. But, under existing circumstances, when none of these prohibitory conditions exist; when no funds are asked for; when in fact nothing is asked for but permission to employ, under the sanction of law, and for the benefit of the State in its highest concerns, the funds that will be furnished; when that permission moreover has been granted freely to several of the smaller towns of the State, and never I believe refused in any case of formal and regular application; when the State university is fallen beyond the hope of revival; when every other State in the Union is advancing in education, and aiming in that respect at State independence; while our own State, populous, proud, and wealthy, is in such deep and humiliating destitution, as to be dependent on other and inferior places for the education of her youth; and while our patriotic and high-souled city pledges herself to rescue the Commonwealth from a condition so degraded, and is amply competent to redeem that pledge—under these circumstances, when the call to grant is so loud and imperative from every quarter, and not a prohibitory whisper is any where uttered, under the sanction of reason or common sense, for Kentucky to refuse a charter

to a Louisville university, would be but little short of an act of madness and political suicide. It would be rashly to decree her own loss of rank, respectability, and influence in the Union. For I repeat emphatically, that unless Kentucky contain a seat of learning corresponding to her wants and standing, the sun of her glory as a community will go down, never to rise again; and the sceptre of her political influence will be wrested from her, never to be redeemed. The cultivated minds of other portions of the Union will as certainly triumph over *her* mind, from its want of cultivation, as disciplined squadrons triumph in battle over hordes that are undisciplined and strangers to arms. Nor is this doom pronounced by me in any pretended spirit of foresight beyond what is common. The prediction is but the result of the lessons of experience, united to a plain deduction from facts. It is a matter of as obvious and absolute certainty, as that the earth would no longer be the parent of living fountains and fruitful fields, should the sun cease to shine on her, and the heavens withhold their moisture.

At a crisis in the condition of our State and city so preeminently portentous of good or evil, improvement or deterioration, according to the course of action we may pursue, a heartless indifference to the prospect before us, and toward the measures to meet it, would be highly reprehensible in us, not to apply to it a more condemnatory term. Worse however still—inexpressibly worse, would be a spirit of determined and relentless opposition to the improvement contemplated in the Mental Cultivation of Kentucky and Louisville. Nor is it possible for me to believe, that, in the abstract, and apart from collateral and sinister influences, a spirit of the sort is cherished by any one among us—not even by the most reckless contemner of letters. By a law of his being, which holds him to its purpose with the power and steadiness of instinct itself, every member of our race, not under the dominion of madness or idiotism, prefers knowledge to ignorance, and cultivation to rudeness, as certainly as he gives a preference to light over darkness, or to pleasure over pain. And this is as true under the night of savagism, where

knowledge of some kind is coveted and esteemed, because it is power, as beneath the day-blaze of civilization and science.

True; we have in the midst of us a few *malcontents*, on whom I might bestow without injustice a name of harsher and less flattering import (and to the credit of the community, they are *but* few) who have thrown their weight, like traitors in the fortress, into the scale of a neighboring school of medicine rancourously hostile to our Medical Institute. Fortunately however for the welfare of Louisville, and for the cause of medical science in the West, their weight on the prosperous condition of the Institute is already but as that of the dew-drop on the lion; and all that is necessary to strip them of the last remnant of it, is to surrender up their names to the public whom they have wronged. This done, their fate would be sealed. The indignation of the city, whose interests they have faithlessly endeavored to betray, would come down on them like a fire-shower, consume them in their unworthiness, and annihilate whatever of petty consideration they unmeritedly possess. I shall only add, *that they are known.* Let them therefore beware.

I am told that there are also in our city a few well-disposed, but incorrectly informed, and I fear ill-advised individuals, who, though friendly to the establishment of the Medical Institute, are opposed to the introduction of the general system of education, which I have so earnestly recommended, and predicted of it such splendid and profitable results. They are inimical more especially to the erection of an university. And the ground of their unfriendliness is the expensiveness of the project. To those individuals a twofold reply may be readily, and in my view satisfactorily rendered.

In the first place, unless the amount of expense be unreasonable and oppressive, the wealth of the purse should never come into competition with the wealth of the mind, nor be withheld from its promotion. To weigh dollars and cents against *knowledge*, *literature*, and *morals* (for in *well-conducted education* the three are essentially and equally involved) is a measure unworthy of the intelligent and the virtuous. Nor, on due reflection, will characters of the kind be found

among its advocates. As soon could they be persuaded to barter truth for falsehood, and diamonds for dross. To the pure and high-minded this truth is self-evident. To offer proof of it therefore, might weaken its claim to the credence it commands.

Again. By the establishment of a well devised system of schools, with an university at their head, the whole being administered by a competent number of well-qualified instructors, Louisville would profit in a *pecuniary point of view*, as certainly as on the score of science and letters. Her property would enhance in value far beyond the expenses incurred by her in the august achievement.

In support of this position I might confidently advert to the example of Geneva. That beautiful and far-famed city surpasses Louisville but little in population (her inhabitants amounting to about *thirty thousand*,) and, in pecuniary resources and commercial advantages, is greatly inferior to her. She has nothing comparable to our "Beautiful river," nor to the matchless West and South, to pour into her lap the opulence of a nation. Her only source of wealth is the industry, steadiness, and frugality of her people. Yet she sustains now, and *has sustained* for ages, one of the most *instructive*, if not the most distinguished universities of the world. The number of her Professors is from twenty to thirty; her library contains from seventy to eighty thousand volumes; in grandeur, richness, and excellence, her observatory, museum, and cabinets correspond to it; she educates in the higher branches of science and letters not less I think than one thousand pupils, a large proportion of them from distant places; and, instead of being impoverished and oppressed, she is enriched in pocket, as well as in mind, refinement and renown by her splendid institution.

Gottengen moreover, with a population of only ten or twelve thousand, and but little wealth, possesses a still larger library, with cabinets and museums not inferor, maintains a more extensive corps of Professors, educates, if I mistake not, from twelve to fifteen hundred pupils in her university; and is benefitted in her pecuniary resources by the enterprise.

Let the citizens of Louisville reflect on these, and scores of other similar examples that might be presented to them, and cease to shrink, on account of the cost, from the erection of institutions, which would contribute alike to the wealth, and lustre, and aggrandizement of our city. It is institutions unwisely established, and feebly or faithlessly conducted, that prove an evil; those of a contrary character are always a blessing. To this the world presents not an exception.

There is yet another very important light, in which this subject deserves to be considered. The heavy expenses incurred by the gentlemen of Louisville in sending their sons and daughters to distant seats of learning, and maintaining them there, would do much toward the establishment of institutions at home.

The expenses of their sons in particular at remote colleges are sometimes enormous. Not only do they include the outlays for travelling, education, subsistence, and clothing. These constitute too frequently but inconsiderable items in the entire amount. Young men, when removed from the supervision of parents and guardians, frequently squander their means in the most uncalled-for and excessive degree, as well as in the most unbecoming and reprehensible manner—in horse-hire, drinking, gambling, and other forms of riot and proffigacy. Nor is this all. They contract debts at times to very serious amounts, through the arts and enticements of unprincipled individuals, who plant themselves around colleges, for the purpose of practising and preying on the inexperience of youth. To swell the evil to a still higher pitch, while young men are thus recklessly and culpably expending their money, they are also dissipating their time, and too often forming idle and irregular habits, which cling to them for life, and bring them to ruin. To avert this array of vice and misfortune, the most promising means is an education AT HOME,

A circumstance not yet adverted to would probably lessen very materially to the city of Louisville the cost of erecting the institutions recommended. Were a charter for a Louisville university granted by the Legislature, it is be-

lieved that the several religious denominations—Baptists, Episcopalians, Presbyterians, and Methodists, in the State, aided by those of some of the adjacent States, would each establish in our city, as a branch of the university, a college of its own. The increase of strength, standing, and influence, which Louisville would derive from such a measure, is too obvious to need a revelation.

Such are some of the thoughts and reflections awakened in my mind, by a prospective view of the age of Mental Cultivation, about to open on the city of Louisville. The theme so full of interest and importance to the people of the west, and to the friends of science and literature every where, is yet far from being exhausted; and it was my intention to discuss it in greater extent. Time however forbids me, and admonishes me to bring my discourse to a close. And I obey the injunction.

Before concluding however indulge me for a moment in a passing reference to the sense I entertain of my deep indebtedness to the community I reside in. To the city of Louisville, where I have recently fixed my home and am still but a stranger, I have yet done nothing that deserves to be called a *service.* I trust I have done enough to evince my attachment to it; having established in it what I design for my last earthly abode; but a want of opportunity has prevented me from doing more. Yet honors have been already conferred on me, privileges granted me, courtesies shown me, and confidence reposed in me, far beyond what I had ventured to hope for; and for which *words* could render but a scanty and transient tribute of thanks. By *deeds* therefore alone shall I, as far as possible, supply the deficiency. Neither can the language of them be perverted, nor their purport misunderstood.

To this effect then, and in furtherance of the great enterprise in which we are engaged, I here, in presence of this assemblage of my fellow citizens, and in a still MORE AUGUST AND HEART-SEARCHING PRESENCE, solemnly proclaim my settled resolution to devote the labors of the remainder of my life. Nor, death, or some disqualifying disaster excepted,

shall any occurrence make me swerve from my purpose, unless Louisville herself faint or faulter in the glorious work, and abandon its prosecution. And that defection would be all but miraculous. As soon almost should I expect to see the current of the Ohio abandoning its downward course, and recoiling toward its parent fountains, as to witness in the conduct of the citizens of Louisville a moral recoil, so unwise in principle, so wanting in self-respect, and so injurious in its consequences.

ART. II. *Remarks on Febrile diseases, with Cases.* By JOHN HARDIN, M. D.

ESSAYS on Fever professing to prescribe the best possible course of treatment are so numerous, that it has become irksome to the readers of medical Journals to encounter a new one. But without any pretensions to having discovered a new theory, or an infallible remedial course, I hope I shall meet with the indulgence of the profession while giving the results of a pretty extensive experience in this disease. In taking a retrospective view of all the systems, theoretical and practical, which have prevailed, we are astonished at what we deem their glaring absurdities; but while we unquestionably know more of the pathology of fevers, I am not sure that our superior success in their treatment is at all commensurate with our advanced pathological knowledge. Almost all the important articles of the Materia Medica, and many now considered insignificant have been used for the cure of this universally prevalent malady, and it is but reasonable to suppose, that, notwithstanding the absurdity of the theories of the ancients, much of their practice was better than their theories. In their extensive trials of remedial agents, they could tell what course of treatment was most successful although they did not know why it was so.

These remarks have been elicited by considering the marked change which has occurred in the treatment of fever, in Kentucky, during the last eight years. In the years 1829–30, '31 and '32, it was very common in the commencement of fevers to bleed, to give an emetic of tartar (often combined with Epsom salts) which was followed up with calomel and jalap. The whole subsequent treatment was only a modification of the same active plan, together with a great variety of febrifuge powders and "fever drops." It may be that fewer deaths occurred then than at the present time. Yet every one knows that death would be almost co-extensive with fever if the same curative plan were now practised, which was then in vogue. The reason must be, that the disease has changed, and this change may be dated from 1833. It is distinctly and painfully recollected that in that year, the great modern scourge of the world visited almost every village, and desolated almost every hearth in a very large portion of Kentucky; and it was, a short time thereafter, remarked in the publications of the day, if I am not mistaken, that the prevailing autumnal fevers wore the livery of cholera, that there was an unprecedented proneness to irritable bowels, and that a corresponding change in their treatment was required. While cholera has passed away and become a matter of history, this modification of autumnal epidemics has become permanent. In the years first alluded to, a patient attacked with fever, usually exhibited a flushed countenance, full, strong pulse, throbbing pain in the head, white furred tongue, costive bowels, and hot dry skin. At the present time we meet with many cases in which every symptom is reversed. Instead of a flushed face we see a shrunken, bluish pale one—in place of a resisting, full pulse, we have a small half filled artery, numbering from one hundred and twenty to one hundred and fifty beats per minute. Instead of headache we find pain in the humerus, the stomach, bowels, chest or back—often in all of them. The pain in the humerus is sufficiently frequent to be accounted one of the symptoms of *our* fever, especially of those cases occurring in the winter. Instead of a white coat on the tongue, the most frequent appearance is that of a broad brown stripe, down its middle. In place of

costive bowels, diarrhœa is often observed; and instead of a hot dry skin, we have a cool, clammy surface. Do not such remarkable changes of symptoms, require as remarkable changes in treatment?

It may be objected here, that I have only drawn a contrast between the common bilious, and the congestive fever. This is true; but in the years first designated "bilious fever" was the ordinary, and "congestive fever" the occasional autumnal disease of the country. The latter bore to the former the relation of an exception to a rule. Since the year '33 this relation is reversed. Without bearing this change in mind the student of medicine, just now entering upon the practice of his profession, after one season's experience, might be as reasonably astonished, at the practice of "ten years since" as the practitioners of that day were at the course of those who preceded them by fifty years.

But while Epsom salts, jalap and other hydrogogues have fallen into almost total disuse in the treatment of fever, there is one article retained, under the idea that it is a mild, bland and soothing aperient—I allude to castor oil. Against this medicine I must bear the most unequivocal testimony, as commonly used, and I give it as my opinion that it generally does more mischief in the country than any other one purgative—always excepting Morrison, Brandreth, and other nostrum venders' pills.

It is common in the country, where a physician is not conveniently near, upon an attack of disease of almost any description, to administer a dose of calomel, at night, and follow it, in the morning, with castor oil. If the disease be congestive fever, the intestinal irritation is greatly increased, and I am sure that, upon the supervention of a violent case, one single dose of this "bland aperient" may decide the patient's fate. I cannot think that this opinion of castor oil is the result of prejudice—I was led to it by witnessing the effects of the remedy, in convalescent cases of cholera at first, and often since in cases of fever. I never knew it used in the consecutive fever of cholera, without being followed by a relapse, which was usually fatal. When there is no gastro-

intestinal irritation or inflammation, I know of no better article as a speedy and thorough evacuant; but when either of these conditions is present, there are few more deleterious. Indeed, the purging off of calomel, before it has had its legitimate effect on the liver with even a warm water injection is pernicious, and I have remarked upon the ol. ricini, because it is in such common use, and is supposed to be so exceedingly innocent. If a dose of calomel is administered to a man laboring under congestive fever, with a small, weak pulse and cool skin, that calomel should not be washed out until the pulse becomes fuller and stronger, and the skin, as a consequence, warmer; but, on the contrary, if it does not produce these effects in eight or ten hours, it should be repeated, and if the bowels are obstinate, rhubarb and ipecacuanha may be conjoined, while stimulating dermoid applications are useful adjuvants. The proposition is simply this. If twenty grains of calomel fail to excite the liver by reason of irritable bowels, how much will be required to produce the effect, if you triple the intestinal irritations? I can, perhaps, present the idea more clearly by the details of a case in point. Mrs. ————, aged about 32, of delicate constitution, seven months advanced in gestation, was attacked with mild symptoms of fever. A dose of calomel was administered at night, followed in the morning with oil. Purging was induced, but not of a bilious character. The general symptoms were exalted, and a second dose of calomel was administered, followed, as before, with oil, and also with like effects. This course was persevered in for about ten days, at which time I was requested to see her. She was greatly prostrated—pulse one hundred and thirty, and very small—bowels discharging frequent, scanty, watery evacuations, of a light color—mouth mercurialized, but no other part of the system manifesting a like influence. It may be remarked that the prostration was so great, that she could not be raised up without fainting—She was ordered to take forty grains of calomel. The next morning brought no amelioration of symptoms, except that the bowels had not acted since the exhibition of the calomel on the preceding

evening. At ten o'clock a general sinking, pulselessness, &c. continued for an hour, when she was revived by hartshorn, friction, &c. Forty grains of calomel were repeated at evening; no appreciable change was observed, and the same dose was repeated. No alvine evacuation took place after the administration of the first dose of calomel, but a very perceptible change for the better, in the pulse and skin, appeared in the morning. I directed calcined magnesia, in small portions, to be repeated at intervals of three hours, until the bowels were opened. After taking the second portion of the magnesia, the bowels acted, discharging an enormous quantity, (nearly a chamber pot full) of very offensive, black tarry matter. In twenty minutes, a second discharge, similar in quality and nearly equal in quantity took place—in fifteen minutes, a third discharge, somewhat thinner, and about half as great in quantity as the first. After this last evacuation, the patient manifested that peculiar exhaustion succeeding the expulsion of the contents of the gravid uterus. Prescription—sulph. morph. ¼ gr.—which quieted the bowels and produced refreshing sleep. For some days after this the bowels were a little too active, throwing off bilious matter. Nothing more was used in the case, except the chalk mixture to restrain gently the bowels. The mouth became sore under this treatment, but not to a dangerous extent. In due time a healthy, well-formed child made its appearance, without having the "*mercurial disease.*"

In reviewing this case I cannot believe, that it would not have terminated fatally if each dose of the calomel had been *worked off*, in six, eight or ten hours after they were taken.

A consistent, green evacuation is not necessarily bilious. I was called to see one case on the eighth day after the attack, and atended it until it terminated fatally five days afterwards. In this case, all the evacuations were of a green, tenacious, mucous character. When urine was with them, they presented a mossy, arborescent appearance, very like the floating moss deposited on logs and stones, in the bottom of ponds. If the water was poured off, they presented gelatinous masses, adherent to the bottom of the containing ves-

sel, of a grass green color, as destitute of odor as white mucus, and imparting no tinge to water. I am ignorant of the cause of this peculiar evacuation. A medical friend told me that he had, in a few cases, found it, upon post mortem examination, adhering to inflamed portions of the bowels. It is to be desired that its cause should be better understood. I have witnessed it in but two cases, both of which terminated fatally. Both were persons of feeble constitutions, and in both, these discharges continued from the beginning to the end of the disease. In one of them the soft parts around the jaws swelled enormously, and on the left cheek a large spot mortified, and presented externally an inky black, glossy appearance. Was it phagedenic ulceration or mercurial? There was certainly no mercurial fetor nor undue salivary secretion. Nor was calomel used so extensively as in many other cases that I have treated. It is the only case of the kind that ever came under my notice, and at the risk of the charge of mal-treatment, I mention it, with the hope that it may be made useful, in some way to the profession. To me it was anomalous.

Although I have borne my testimony against the practice of purging calomel out of the body before it has had its proper effect upon the liver, I am no less opposed to the useless repetition of that article. It is agreed that an organ may be excited above, as well as depressed below, the secreting point. If this be true, it follows as a necessary consequence, that after exciting the liver to free action, it is as irrational to increase the excitement, as it would be not to excite it at all. By continuing to give calomel after secretion is freely established, the liver may be excited above the secreting point, and each succeeding dose but increases the mischief, until finally no bile is voided, but on the contrary the serous exhalents become excited and aqueous discharges result. Under such circumstances, a full dose of pulv. Dov. is the best remedy.

There is an endless variety of shades apparent in the fevers of this country, all having the common condition of great internal congestion, and a large proportion indicating gastro-enteritis. No precise plan of treatment can be laid down as

invariable. If two cases can be found precisely parallel in all their elements, then and then only, can a special course of therapeutics, similar in all respects, be adopted in both. One invariable, (and the first) indication is, to induce re-action. For this purpose, a very useful agent is the lancet. But it must always be used with great caution. Nothing can be more true than the remark of Marshall Hall, that patients with inflamed mucous membranes, bear the loss of blood badly. Thus, a man who would bear the loss of sixteen ounces of blood in health without fainting, would faint on losing eight or ten ounces, while under an inflammation of the mucous lining of the stomach or intestines. In these cases, the abstraction of blood should not be carried to syncope, but stopped as soon as the pulse rises. If it be continued till the pulse sinks again, it is pernicious. Fainting upon the loss of six or eight ounces of blood is no evidence of the absence of inflammation. For if an individual in health, would lose sixteen or eighteen ounces of blood before syncope was induceed, the same individual, suffering with pleurisy, would lose twenty-five or thirty, and with phrenitis, thirty-five or forty, while with gastritis, he would faint if he should lose six, eight or twelve ounces. In blood-letting, therefore, in congestive fever, we should not expect to abstract more than a few ounces, and whenever the pulse rises, we should stop the orifice immediately, before it sinks again.

Another useful agent in exciting re-action, is prompt emesis, by ipecacuanha. It should be given—a tea-spoonful at a time—every ten minutes, until free vomiting is induced. If, however, the patient flinches from moderate pressure on the stomach, emetics are inadmissible. If the bowels are loose, a foot-bath of strong salt water, as hot as can be borne, followed by a dose of calomel and Dover's powder, with the application of external heat, will be useful. Should the bowels be bound, calomel and rhubarb will be found sufficiently active. In some cases, sinapisms to the extremities, are very useful. But the most perplexing cases are those attended with sick stomach, retching and vomiting. Some cases there are, with these symptoms present from the begin-

ning to the termination of the case, either in the death of the patient or subduction of the disease. These cases are attended with oppressed respiration—the chest heaving, while the diaphragm and abdomen are quiet. It is in these cases that the disease first manifests itself by an acute pain in the shoulder or humerus, although this is not always the case. I saw a boy sitting up, complaining with violent pain, attended with swelling in the arm—tongue furred and skin hot—the pulse, one of that half filled character, upon which it is not considered safe to bleed. A prompt emetic was administered and a dose of calomel prescribed. The disease was thought to be inflammatory rheumatism. The next day, there was considerable improvement, and no medicine was thought necessary. On the third day, there was cold skin, small frequent pulse, parched tongue, unquenchable thirst, laborious respiration, and extreme tenderness of the abdomen. Calomel, sinapisms, blisters, et cetera, were diligently and perseveringly used, to no purpose. Bilious evacuations were freely procured, but all in vain. On the fifth day he died. I proposed an examination, but it was evaded. I supposed that the lungs were disorganized before death. But another very similar case has since occurred in the same family, and within three weeks of the first, which exhibited such a mass of intestinal inflammation, as is seldom witnessed. The lungs were sound. Their functional derangement, in the last case, was only symptomatic, and this was probably the fact in the other.

In a few cases the other cavities only show signs of inflammation, the abdominal viscera seeming to remain sound. I saw a case, in which the first appreciable sign of disease was coma. At the same time, the breathing was laborious, pulse small, weak and frequent, bowels bound, tongue furred, eyes suffused, and the muscles of the back and neck rigid; the patient all the while moaning and evincing pain in the head. No injury had been sustained from external violence. A tea spoonful of ipecac was given, and repeated at intervals of fifteen minutes, until three had been taken, without producing the least nausea. The inelegant, but potent process

of tickling the throat with a feather, was resorted to in vain. Twelve powders were put up containing five grains of calomel and twenty grains of ipecac, each, one of which was taken every two hours until all were consumed. While taking the last of them, the bowels acted well, throwing off large quantities of bilious matter. The last dose produced sensible nausea, and the symptoms were more favorable. Next day I prescribed five grains of calomel, with ten of ipecac, every four hours, which kept up bilious purgation and improved the condition of the patient. The last two or three doses excited slight nausea. On the third day he had five grains each of calomel and ipecac, every six hours. This was continued during two days, and sustained the dejections of bilous matter freely. At the end of this time, all the symptoms subsided, and the patient was perfectly relieved, notwithstanding the character of the discharges had not altered. These continued black and copious for two days after all remedies, except water gruel, had been suspended. Query. If the calomel had been continued, would not the liver have been excited above the secreting point? Dr. Bush reported in the Transylvania Journal a fatal case, with analogous symptoms, in which the whole surface of the pia mater was covered with pus. In his case the stomach was similarly insensible, and every other symptom almost identical. I read his, a few days before the above case occurred, and with my eyes thus opened, treated it with more energy, than otherwise I might have done; or perhaps I should say that on that account, I relied more on ipecac and less on calomel.

In the cases referred to as the most perplexing, ushered in and accompanied with continual retching, calomel is our sheet-anchor, with blisters, injections and entire abstinence from food and drinks, as adjuvants. In these cases, the bowels are usually confined, and all purgatives except calomel, increase the gastric irritation. Perhaps calomel does this likewise, but from its gravity, if administered in the form of pills, it is retained in the stomach until it can excite the liver. I treated a case of this kind, in which nothing was retained for the space of twelve days, except calomel. A tea spoon-

full of water—acidulated, alkaline or any other kind of drinks would produce instantaneous emesis. In the beginning of this case, the pulse was strong, attended with violent pain in the head. The abstraction of ten ounces of blood induced syncope. Vesication over the epigastrium and on the extremities was ineffectual until the calomel had relieved the liver, which did not occur fully until the twelfth day. Then very small portions of arrow root were retained. This case recovered without the supervention of ptyalism. In such cases, as indeed, in most others, I have found it best to give all the calomel that is intended for twenty-four hours, at a single dose. The mere imagination of taking medicine every three or four hours is a potent cause of prolonging nausea, and if it is safe to give forty grains of calomel in the course of twenty-four hours, in divided portions of five grains each, it is equally safe to give it all at once, and certainly it is equally, if not more efficient. I imagine, that it is the experience of all who have directed their observation to that point—assuredly it is my own, that while five grains of calomel given every four hours until thirty grains be given, will produce six or eight small, griping, prostrating discharges, thirty grains given at once will produce but one or two copious operations, after which the patient feels his strength increased. Such is my experience and let him who doubts it try both plans,—on a dyspeptic, for example, as the most unfavorable case for my view of the matter, and I feel satisfied that he will be convinced. Nay, I will go farther and say, that a single dose of five grains, if it operate at all, will operate oftener, and produce more prostration than a single dose of thirty grains. If this be true, as I verily believe it to be, it can only be accounted for, on the supposition that the calomel does not purge in either case, but that the bile poured into the bowels is the acting purgative, and while five grains produces a dribbling of bile into the duodenum, keeping up a perpetual irritation, until all is discharged, the thirty grains produces a complete disgorgement of the liver at once; the bile, en masse, works itself off, and the patient feels himself relieved and strengthened.

There is another form of congestive disease, which it may be proper to notice briefly before I conclude. I allude to dysentery—and I mention it merely to state the result of a remedy which I have used in but two cases. The subjects of both cases were delicate women. In both the ordinary means were fairly tried—calomel, opium and ipecac were given in every shape, large doses and small doses, without producing bilious secretion or mitigating intestinal irritation. On the contrary, calomel appeared to increase the bloody discharges. Under these circumstances, five grains of Carpenter's black oxyd of mercury,* with ¼ gr. sulph. morph. produced very speedy relief, exciting liberal secretion of bile and a persistent use of them maintained a steady and rapid convalescence. In both cases salivation was induced.

ART. III. *Extraction of a Nasal Polypus, on the 14th of August*, 1837. By JOHN C. BRENT, M. D., of Louisville, Kentucky.

On the 21st day of July last, I was called on by V. H., a youth aged about sixteen years, who had been sent to this city, by his relatives residing in Spencer County, Kentucky, for my advice and treatment, in relation to an alarming tumor that had but a few weeks before begun to protrude from the left nostril.

But a slight examination revealed the character of the tumor; it was a nasal polypus, doubtless of rapid growth, and by entire exemption from pain, the attention of the patient had not been called to the seriousness of his condition until about three weeks preceding the above period, when the polypus was first felt by the finger and could be discerned by the eye of an examiner. In the short period of three weeks, its growth was such as to protrude within the alæ of the nose,

*NOTE. One grain of the black oxyd is equal to twelve grains of the blue mass.

sensibly dilate the left nostril, greatly affect the speech, cause frequent and violent spells of sneezing, and a free flow from the lachrymal gland. The patient's sleep was frequently disturbed by sudden starts, under a fear of suffocation. The general health seemed unimpaired, and he experienced few other unpleasant symptoms, than occasional pain over the left orbit, and a constant coryza that could not be said to have become acrid.

Preparatory to any attempt at operating, the irritability of the lining membrane of the nose, had to be measurably overcome. This was accomplished by the daily introduction, for a few days, of an elastic bougie of moderate size, through the nose, into full view behind the posterior nares. The first introduction was accomplished with difficulty, in consequence of the great resistance of the polypus and the sneezing that the bougie gave rise to; this process was repeated daily, until it could be done with great facility, without exciting sneezing or causing that great trepidation experienced by the patient, when first introduced. The bougie was now substituted by an elastic catheter, of nearly double its size, to which the patient, in a few days, also became perfectly familiarized; when it was substituted by a metallic probe, to which was given the curve of the great nasal foramen. As soon as this could be introduced, with facility, he was considered as prepared for the operation, which was performed on the 14th of August, in the following manner—sixty drops tinct. opii, were given a few minutes before the operation. The metallic curved and eyed probe, five inches long, threaded with a flaxen cord, was introduced into the nose, and carried, the eye foremost, beyond the posterior nares; from which point, with a long and delicate pair of forceps, an end of the thread was taken from the probe, and brought out of the mouth; the probe being withdrawn, the ends of the thread were so tied together, as to cause that part of it that passed through the nose to lie perfectly flat on the palatine bone. The object of this thread was to assist in arresting hemorrhage, always to be apprehended in such operations, by attaching to the end brought out of the mouth a piece of sponge, properly

shaped, and drawn by the nasal extremity, so as to plug up the posterior opening, in the event of hemorrhage. The probe being again threaded with a similar cord, was introduced as the preceding, but leaving the two ends hanging out of the nostril, the thread was seized with the forceps, as soon as seen posteriorly, and the loop brought out of the mouth, where it was secured by an assistant. The probe was then retracted, gliding however when withdrawn, over one portion of the cord with which it was threaded. The loop held securely by an assistant, its two extremities were then separated, and one raised on each side of the pendulous portion of the polypus, and together passed through the eye of a flat silver probe, three inches long, that had received a slight curvature, adapting it to the tumor. The extremities and loop now held tense, the probe thus threaded was slowly and carefully introduced up the nostril over the superior portion of the polypus, until it met such resistance, as to convince me that it had encountered the pedicle of the polypus; satisfied of this fact, the probe was then secured in a way to maintain its position, the loop disengaged and its extremities drawn through the nose, until resistance rendered it certain that the polypus was noosed. The ends were then twisted to an extent sufficient to strangulate, yet not to endanger a division at the point of contact; the probe during the time being carefully maintained in its position. At this juncture the large nasal forceps was introduced, as far as practicable, a blade on each side of the polypus, when it was grappled, and care taken when the blades were closed to have both the probe and twisted cord interpose between the extremities of the blades. This was particularly aimed at, to guard against the laceration and cutting, mostly consequent on the application of this instrument and generally resulting in failure. In the case in hand, every expectation was happily realized; for the polypus, probe, and cord, thus grasped, were alternately and gently twisted to about half a circle and back, cautiously avoiding, (from the violence that might be apprehended) ever to make an entire revolution. This motion, a few times repeated, resulted in the perfect and

entire disengagement of the tumor at its root, when it was gently extracted, to the great joy of the patient, and followed by inconsiderable hemorrhage. The polypus was double limbed, displayed no marks of violence, and the only discernible breach of continuity, was the point of attachment, which was so inconsiderable as hardly to leave a doubt that the separation must have taken place at the root. The patient, a few days after, was permitted to return to his residence in the country, and I have been very lately informed that no symptoms have since occurred to lead to the slightest suspicion that he will again be afflicted with a return of his malady.

Here I might content myself with simply having detailed the mode of operation that was resorted to in the foregoing case; as by it alone, I have any hope of contributing to the future aid of those who may be called on to perform the trying and responsible duties of surgeons. But when we are told by the distinguished surgeon, John Bell, "That in Polypus we have one of the most loathsome and *fatal* diseases, that it is described in terms little suited to convey this idea to the young surgeon, who while he reads a systematic author, or hears a lecturer talk in slight and familiar terms of the disease and its cure, little suspects the dismal scenes which are passing in the chambers of the sick, and puts his hand with little forethought or prudence, to operations the most difficult for a man of experience, the most impossible for an unskilful person to perform," I am tempted to subjoin a few reflections.

True, the time was when polypus was considered one of the most horrible and incurable diseases, and, rather than not unroot such tumors, surgeons recommended the cutting up of the nostrils, bursting up the cells of the face, trepanning the *antrum Highmorianum*, and rooting away the spongy bones. On the other hand, and at a later period, it has been represented as generally a simple, trivial, and harmless disease, always mild or malignant; if mild, frequently disappearing spontaneously, or made to recede in most cases, by the timely application of a solution of sal ammoniac, alum, or some

other astringent or styptic. If malignant, deriving that character from a previously tainted and diseased system, aggravated by all applications, and terminating fatally, sooner or later, regardless of all the operations and treatment that the profession could provide.

Happily the duties of the surgeon at the present day have become plain in relation to the subject under consideration; and on this account I have thought it not inappropriate to take this hasty glance for the purpose of shewing the remarkable discrepancy that has prevailed in relation to the nature and treatment of polypus, as well in ancient as in more modern times, and the great benefits that are accruing to mankind from the modified views and treatment of the present day.

I believe that I but express the opinion of the profession at large, when I state that polypi can never, properly speaking, be considered either mild or malignant; yet if let alone they must inevitably terminate in death. Behold a growing tumor, taking its rise from a small peduncle within the cavity of the nose, either from the schneiderian membrane or an elongation of the membrane covering the ossa spongiosa. Such tumor must in time, from pressure on the soft and bony cells of the nostrils and jaws, produce a fearful catastrophe unless arrested by the art of surgery. For, it is confidently believed that nothing short of the aid of skilful and intrepid surgeons will be found capable of averting the fatal termination of this formidable malady. The only difficulty to be encountered will be the selection of a mode among the many, recommended by the ablest surgeons, the least beset with difficulties, and at the same time calculated to lead to a happy result. Extraction, ligature, caustics, and excision will each claim his serious consideration; and the successful operator will have been more fortunate than myself, if not foiled by a rigid adherence to any of the rules coming under the imposing recommendations of Richter, Pott, John Bell and several others, among the most justly distinguished in the profession. The fear of extending this communication far beyond the limits usually appropriated to reported cases, renders it im-

practicable to point out the many difficulties to be surmounted, in following in detail, the recommendation of the distinguished surgeons just named; but when the duty shall devolve on any reader of this report, of having a case of nasal polypus to contend with, he will appreciate the truth of these remarks, in having to encounter such difficulties at every step as not only to call for the exercise of much discretion, but so great a modification in the detail in order to succeed, as very inappropriately, afterwards to deserve the denomination of an imitative operation. Take for example the foregoing case. V. H. the patient named, submitted to the operation of extraction on the 14th of August, twenty-one days after placing himself under my charge. I was not then unfamiliar with the glowing descriptions of Levret's double canula and silver wire for noosing nasal polypi, but in the language of John Bell, "believed the noosing of a nasal polypus futile," (*with such an instrument.*) Yet contrary to the opinion of this distinguished surgeon, I believed that such tumors could be otherwise noosed, and if properly done, might lead to the more successful application of the curved nasal forceps. How far my views in these particulars have been confirmed, may be seen from the foregoing case, its progress and termination.

I should deem it a great omission to conclude these remarks, without declaring the opinion unequivocally, that all attempts properly to apply the ligature, would have proved abortive without the preparatory routine to which the patient was subjected. And that all the principal objections to the forceps were fully obviated by its application in the manner pointed out.

These views suggest the following points for professional consideration.

1st. Is it probable that by familiarizing patients to the use of instruments, any facilities are thereby acquired, in their application in noosing polypi?

2d. Is it possible for any nasal polypus protruding anteriorly (for no other kind has been under consideration) to resist the successful application of the simple instruments described, in the manner pointed out? And,

3d. Is it not probable that the double reliance on the ligature and forceps at the same time, will add greatly to the success of such operations, and prove a valuable substitute, if not for all previously suggested modes, certainly for that of excision, the formidable yet favorite operation of some of the most distinguished surgeons of the day?

ART. IV. *Miscellaneous Cases, with remarks.* By THEODORE S. BELL, M. D.

IN order to assist in giving precision to principles of medical philosophy, and to direct the physician in similar cases of intricacy; to treasure up valuable facts, and add individual observation, to the mass of general experience, we propose to submit to the consideration of our readers, a few cases of a miscellaneous character, which are believed to possess interest enough to deserve being recorded. And however homely the garb, in which such a paper must appear, we are confident that what may be lost in the evanescent attractions of speculative reasonings and reflections, will be amply compensated in the sober details of fact and practical truths, which address themselves to the daily pursuits of the physician. These are the matters that most nearly concern the practitioner of medicine, and hence all attempts to please the fancy, at the expense of the judgment, are alike repugnant to good taste and common sense. But facts, clothed in simplicity, accurate pictures taken at the couch of the sick, strike home to the heart, because they belong to our nature, and form a part of humanity. In making such a detail, every departure from the beaten track of disease should be noted with care, and recorded with fidelity. If the improvement of others be the object of the writer, exaggerations must be sedulously guarded against, and we are persuaded that it is better to tell only so much of a truth as will be credited, than to trumpet forth the whole, if it cannot be fully believed.

The fancy may be rapt in an ecstacy by tales of wonder, but reason spurns them as unworthy of notice, and therefore the meteors of one age, descend to the next generation, shrouded in darkness, because the imagination is as various as it is whimsical.

But we are lingering too long at the threshold, and shall proceed at once, to our duties, by detailing some singular features of *placenta prævia*, and hope that others may be induced to write out such facts upon this subject, as have presented themselves to their observation.

FIRST CASE—SINGULAR HEMORRHAGE.

In the month of September, I was called to a case of hemorrhage, the subject of which was a young and healthy married lady. From the group of symptoms, menorrhagia appeared to be indicated, and it soon ceased, apparently under the influence of purgative medicines and quietude. The health was such as to excite my suspicion, that something more than the ordinary menorrhagia, was at the foundation of several singular symptoms, though its recurrence in a few weeks after its first check, with the attendant phenomena, re-established the opinion of deranged menstruation. It was again treated as before, with the same success, though attained with more difficulty this time. I became satisfied at the third call to her case, that she was pregnant, a thing only suspected before, and she had now reached the fourth month of pregnancy. The case now assumed some degree of clearness, and I was well assured, that the placenta was placed over the os uteri, though hemorrhage from this cause is not usual in the early months. The bleeding now began to occur more frequently, and fears were entertained of the loss of the child. Between the fourth and fifth month a phenomenon showed itself, which once more threw all my reasonings upon the case, into confusion of such a character, as to bid quite fair for a while to be inextricable. *The bleeding now only came on when the patient was in the recumbent posture, and was checked by resuming the perpendicular position.* I was consequently cut off, from one of the most universal prescriptions in such cases, and the worst apprehensions were excited by this

mysterious and occult feature. The patient was gradually sinking, and my hands were tied by my ignorance of the source of the hemorrhage. All my reflections and investigations for a time failed to give a satisfactory solution to the enigma, but in pushing my inquiries, was directed by my friend Dr. Meriwether, to the truth. Hope dawned upon its management, as soon as the nature of the case was revealed. *It was evident that the placenta was placed over the os tincæ, and had been torn from a portion of the surface of the womb to which it was connected; while the female remained in the upright posture, the head of the fœtus pressed upon the placenta so as to prevent hemorrhage, and when she changed to the horizontal position, the pressure was either removed, or became inefficient, and the hemorrhage followed as a consequence.* The fact of the misplacement of the placenta, was established by an examination *per vaginum*, and the above inference is undoubtedly the correct one. It is important to bear in mind the fact, that inefficient pressure, designed to arrest hemorrhage, *increases it*, by irritating the vessels, a fact too frequently lost sight of, but of much moment in cases of placental presentation.

But to resume the narrative: before the termination of the fifth month, the lady was taken with the pains of labor, immediately succeeding the evacuation of a sloughed portion of the placenta. I determined to try the experiment of bringing away the fœtus before the secundines, which effort was crowned with success, by cautiously pushing the torn part of the placenta out of the way of the fœtus, and pressing upon the mouths of the bleeding vessels, the hemorrhage being quite profuse. Soon after delivery, the lady recovered her usual health—menstruation was speedily re-established, though at the few first periods, it assumed the form of menorrhagia, which was soon relieved by the usual remedies.

A most useful lesson is taught in the case detailed above, and the value of pressure in arresting this form of hemorrhage, is triumphantly and forcibly illustrated. It offers a beacon light in the treatment of similar misplacements of the placenta, which usually terminate so disastrously at the full pe-

riod of utero-gestation. Some of the plainest principles of medical philosophy have been neglected in recommendations for managing such cases, for surely every one acquainted with surgery, knows the resources in the hands of the surgeon, for arresting hemorrhage. Yet no less an authority, than perhaps the very highest in this department of medical practice,* Ramsbotham, enters into an investigation of the question, whether the accoucher should sacrifice the life of the mother or child, in these cases of misplaced placenta. I allude to those cases which reach maturity, for it is then that the danger is great and urgent. Without being disposed to make a trifle of that, which is really momentous, I am persuaded, that there is no necessity for the sacrifice of either mother or child, if the medical attendant is called in time, and as admonition is usually given weeks before the establishment of labor, it is the duty of the physician to warn the family of the necessity of promptitude in calling aid, and if he wishes his injunctions followed he should explain the danger fully to some member of the family, as few persons admire a dogmatic mandate, the reasons for which, they are left to imagine.

In undertaking the management of a suspected case, there should be a prompt examination made in order to determine the location of the placenta. If flooding has already commenced, it is unnecessary to wait for it to grow worse, as there is no very special advantage in that state of things. Pressure should be made immediately *upon the mouths* of the *uterine vessels*, with a plug of fine clean sponge, and the only acceptable evidence that this is accomplished, is the total cessation of the hemorrhage. This is but the entering wedge however, for half-way measures are worse than useless, because it must be remembered that inefficient pressure increases the evil, it is the object to remove. After the sponge is placed in its position, it must be firmly held there, until the pains promise the speedy egress of the child, and at this moment, the responsibility of the accoucher, is to ensure the child priority of passage, over the placenta. In the case already detailed,

* The reader is referred to another part of this number for a review of this very valuable work.

we have seen the effects of full pressure, and of an inefficient one, and if the accoucher acts with judgment and firmness, he may frequently witness such results, so far as success is concerned, as we present in the following case.

SECOND—LABOR, WITH EXTRAORDINARY FLOODING.

In 1834 I was called in the night to see Mrs. D., a lady of delicate appearance but quite a healthy person, and found her in labor, with slight pains, and the most extraordinary uterine hemorrhage I had ever witnessed. The blood had gushed in a full stream over the foot-board of the bedstead, and stood in a large puddle on the floor. I immediately sent for Dr. Meriwether my partner, and we succeeded in arresting and controlling the flooding, by pledgets of lint pressed firmly against the bleeding vessels. Having already ascertained that the placenta was placed over the mouth of the womb, we determined upon making an effort for saving the child. Keeping the pressure firm enough to prevent bleeding, the ergot was administered, which soon established efficient action in the womb, and our patient was delivered of living twins in a few minutes after this agent was given. The detached part of the placenta was pushed aside in order to give free passage to the children, and was then removed without difficulty. All the parties did well and the children have reached their fourth year in a very thrifty condition. Here we find the principle of pressure, perfectly successful, and shall detain the reader, with only one more case on this point.

THIRD—ABORTION, AT THE FIFTH MONTH, WITH MISPLACED PLACENTA.

I was called to Mrs. L. in great haste, and found a great deal of alarm among the friends of the lady. The case was one of much interest, for the husband having lost his first wife in childbed, was greatly alarmed at finding in the present one, an abortion ushered in with profuse hemorrhage. Upon making an examination, the placenta was found presenting. On account of the circumstances detailed above, I would have given much for a consultation, but there was no time for such a thing, and I had to "stand to my gun." Having

learned the full measure of the dangers of the case, pressure was resorted to, in the manner indicated above, which soon controlled the hemorrhage; the pains ceased entirely, and after waiting an hour for the resumption of parturient action, was gratified to find the pains returning, for the effort at abortion, had progressed too far to hope for its suspension. Finding the pains too lingering and weak to make a speedy issue, the ergot was administered four times, with the same result that would have attended the use of the same amount of cold water. Shampooing the abdomen however, brought about the desired action, and by the course indicated above in regard to the detached portion of the placenta, succeeded in bringing away twins, before the secundines, and had it been at the full period, there was nothing in the case, to prohibit the belief that they would have been born alive.

Several other cases of this kind, have presented themselves to my observation, but it is unnecessary to swell this paper with their history. Prior to my experience in obstetrical affairs, I should not have anticipated this misplacement of the placenta, a thing of such frequent occurrence. Yet perilous as they usually are, under proper management they should do as well as almost any other unusual form of labor. Formidable they undoubtedly are, and it would be folly to disguise the fact, yet it is a gratifying truth to know that the resources of medical philosophy, are equal to the crisis, dangerous as it is. Self-possession, coolness, firmness and decision are the appropriate qualities for meeting difficulties of the kind, and if these are in requisition, defeat will rarely bring its blighting curse. The accoucher must watch his compress, with constant attention, for after it is applied, he must remember that he is on a tour of duty, in which no furlough can be granted until the contest is decided. Minutes are precious, and the neglect of a few, may blast the hopes of years. The medical attendant therefore must neither give sleep to his vigilance, nor slumber to his energies, until all is secure.

Having referred to the ergot in several of the preceding cases, it cannot be deemed irrelevant to the objects of this pa-

per, if we enter into an examination of some of its properties though we do it here at the risk of breaking an apparent connection in the cases. That the evidence of medical men in relation to it, is very contradictory, and that many of its powers are not duly appreciated, are matters of notoriety, and its prominence in our materia medica, is certainly great enough to demand the promulgation of such facts as may be in existence, that bear upon the points at issue. These doubtful matters can only be decided by facts that speak in positive language, for if we are not very cautious in receiving testimony, instead of the evidence of facts, we shall have the speculative opinions of dogmatists, and this is especially the case in relation to English writers, for their opinions of the ergot, are in almost direct opposition to the experience of American practitioners. We select a specimen from the sixty-sixth number of the Medico-Chirurgical Review.

Mr. Chavasse, surgeon of Birmingham, at a meeting of a provincial medical association, has recently undertaken to show, that the ergot, may in certain cases destroy the life of the fœtus, and has a tendency to produce hour-glass contraction in the womb. If either of these opinions be founded in truth, the profession should be roused to the fact, and we are glad to find the attention of medical readers called to the consideration of the matter. The *secale cornutem* plays too important a part in the hands of accouchers, for risks of this kind to be often adventured. But the evidence which goes to prove the truth of the opinion, must be very definite to carry conviction to the mind of honest enquirers, and we apprehend that no such evidence can be furnished. Many still-born children come into the world without the agency of ergot, and hour-glass contractions of the womb frequently took place long before the attention of the profession was invited to the properties of this parturient agent. Consequently other causes are equal to the production of this effect. If we meet with them after the use of ergot, we must be very certain that none of these other causes were present, or we cannot with any precision, ascribe the effects to its administration. The occurrences too, if it exerts this baleful influence,

should take place frequently after the use of the ergot, but is this the fact? The experience of almost every accoucher competent to be a witness will answer in the negative. We readily acknowledge that the imprudent use of the medicine, may lock the head of a child in the pelvis in such a manner as to cause death, but this is the abuse of the thing, from which as logicians, we cannot argue against the use. Such opinions as those of Mr. Chavasse, should not be broached without a very broad and solid foundation to stand upon. If true, they should be capable of better proof than he has furnished, and if false they may do mischief with the inexperienced, the unwary, and that numerous class of timorous practitioners, who always mount the fence as spectators, the moment the trumpet sounds to battle. Many persons imbibe a prejudice against a thing readily, who strain hard at swallowing a truth. Without the slightest disposition to run into the *ex cathedra* style, I feel warranted in saying that the hypothesis of Mr. Chavasse is untenable, for after an extensive use of the ergot, I am confident that in no one instance under my observation, has there been a still-born case, except under circumstances clearly independent of the agency of the medicine, nor have I been troubled a single time with hour-glass contraction of the womb, in nearly three hundred cases in which the agent was applied. The experience of others may be in opposition to mine, and if so, they owe it to the interests of humanity, and to the honor and integrity of their profession to let it be known. I repeat, that evidence in support of the positions of Mr. Chavasse, must go directly to the point, it must settle down upon that point, in a clear and definite manner. If this is not the character of the testimony, it cannot command the confidence of the intelligent minds of the profession.

A question of some interest, discussed by Mr. Chavasse, demands a passing tribute. It is in reference to the power of ergot over the immature process of utero-gestation. He thinks that it does not exert any influence upon the womb, prior to the full period, and here my experience coincides with his. Repeated trials have convinced me of its truth, but

it may not be amiss to note a fact which occurred within my own observation some years ago.

While residing at the farm of my valued preceptor, Prof. Wm. H. Richardson, a neighbor who was much devoted to the improvement of the blood horse, turned some brood mares with foal, into a rye field, and they all aborted in the field. Upon examining the rye, it was found that much of it was "spurred" as the farmers call it. That it has no influence upon the human womb in its early gestation, I am well convinced, but as this is a point of much importance, it should be thoroughly sifted and the truth attained if possible. We beg for facts, because the ergot sustains too many interesting relations to be thrown aside on trivial grounds, though if there be errors in its administration, our practice should be pruned of them promptly.

We are confident that a more frequent administration of the ergot, than that which usually obtains, would be a material improvement in obstetrical practice, and we cannot close this branch of the subject without adverting to this point. The truth of the adage, that "prevention is better than cure" is universally allowed, and it will be readily admitted that it is better to cut off the chance of uterine hemorrhage, than to risk its management when it comes. If we can succeed in effecting the proper amount of contractile power in the womb, the patient is generally guarded effectually against flooding. And if we possess an agent capable of insuring this contraction, are we not culpable in withholding it, in cases where there is not an objection to its use? Such an agent we have in the secale cornutum, and it is my invariable custom in all cases, to give from two scruples to a dram of the powder; accordlng to the indications, in those requiring it for expediting labor, it is given at the proper time, and in those which do not demand it for this purpose, it is given just before the egress of the presenting part, to insure such contraction of the womb as to cut off the chance of flooding. Under this state of things I have never had but one case of flooding after delivery, and in that one all the usual remedies failed, though it was finally arrested. As

there cannot be a rational objection made to this principle, the suggestion is respectfully submitted to the thinking part of the profession.

We resume our narrative of cases.

FOURTH—DIABETES MELLITUS.

Mr. Joseph Irwin of this city, called upon me in August, to visit his infant, a child about fifteen months old. The following symptoms presented themselves: morbid appetite, great thirst, tongue heavily coated, suppression of the biliary secretion, enlarged abdomen, anasarcous swellings of the feet, legs, hands and arms. These symptoms had come on suddenly, and the especial cause was unknown. The anasarca was soon relieved under the use of calomel and squills, and the general health improved gradually and slowly. The liver however resisted all attempts at restoring its secretion; all the usual remedies failing to exert any influence upon it, and in this state of things, after I had been administering medicine three weeks, *Diabetes Mellitus* developed itself. I had never heard of the occurrence of such a case before, in so young a subject, and all my investigations failed to give any satisfaction in regard to the treatment I should pursue. The discharge of water was profuse, amounting to several quarts a day, and debilitated the patient very much. The use of the blue mass and jalap was determined on, for their purgative effect and they were given from five to six times a day, several days, without any perceptible benefit. Calomel was substituted for the blue mass, used freely, and continued nearly two weeks, without making any impression upon the Diabetes. At this time, I called upon Prof. Cooke, for the purpose of having his advice. We continued the treatment of the disease by purgatives, for the space of two weeks longer, and during the absence of Dr. C. from the city, I quit the use of purgatives, and resorted to the nitro-muriatic acid bath, made as strong as the skin would bear it. The legs were immersed in this three times a day, and the region of the liver bathed as frequently—a drink was prepared of the same material, and a wine glassful given three times a day. The use of vegetable food was interdicted, and a diet of fresh meat recom-

mended, and under this treatment, amendment soon began to manifest itself. The biliary secretion returned, the tongue cleaned, appetite improved, and the Diabetes ceased altogether; these changes requiring the use of the nitro-muriatic acid, about six weeks. The child has continued in the enjoyment of good health, since the restitution of its natural powers.

The principal features of interest in this case, are the age of the subject of the disease, the remarkable torpidity of the liver, its insusceptibility for many weeks to any impression from the usual remedies, and the final cure effected by the agency of the nitro-muriatic acid drink, and bath. At the time the use of it was first recommended, the child was almost a skeleton, and it was depended upon more as a dernier resort, than with much expectation of benefit. But although successful in this instance, I should not be astonished at its failure in many others, and my principal object in recording the case, is to give others, who may meet any thing of the kind, an advantage which I did not possess, and thus stimulate them to persevere against the most forbidding difficulties.

FIFTH—STIMULATING POWER OF THE SPIRUTUS TEREBINTHINÆ, IN A DEEPLY CONGESTED STATE OF THE SYSTEM.

During the month of July, I was called to see Mrs. R., the lady of one of our most respectable booksellers, and found her in a protracted chill, which had already lasted several hours. The stomach was irritable, the cerebral system deranged, with the usual symptoms in an aggravated degree. The first indication, was to bring about re-action as promptly as possible, but this was much easier decided upon, than carried into effect. The application of mustard sinapisms, to the extremities over a large surface, the use of warm bricks, and hot drinks, were barely equal to the production of a very partial re-action, after a trial of many hours. Febrile symptoms, followed the departure of the cold stage, and were actively treated by depleting measures. It is unnecessary to enter into the whole detail of a case of congestive fever; it is sufficient to remark that after the faithful employment during eight days, of those agents which are usually indicated in

these cases, the disease instead of being controlled, assumed a very threatening appearance. For the space of three days, the hands and arms, feet and legs, were of an icy coldness, the sense of feeling so much destroyed in them that pressure of the hand produced no sensation, the central parts of the body much above the natural temperature, constant irritability of the stomach, respiration oppressed, and the powers of deglutition impaired. Blisters were now applied to the extremities, and that portion of the cold surface, not under the action of the blister, was placed under the use of dry mustard. The blisters drawed finely, but it was not attended with any amendment of the symptoms, and the steady exhibition of mercurial cathartics, with active adjuvants, failed to affect either the alimentary or salivary organs. On the third evening of this state of things, the patient lost her powers of speech, and the pulse became almost imperceptible to the finger. The march of death appeared to be so rapid, that scarce a hope remained for its arrest, and though not easily made to despair under any circumstances, I felt every confidence that the patient could not survive until morning. The group of symptoms detailed above continued in all their force, and a considerable accession of others had now presented themselves. At midnight, of the third day, I determined to give castor oil and spirits terebinthinæ combined, for the purpose of rousing the secreting organs to action, all previous endeavors for that object having failed, and four ounces of this combination were given her at one dose, equal parts of each medicine. In something less than one hour after its exhibition, warmth returned to the extremities, and sensation with it, the pulse rose into fulness, and a general improvement in the symptoms, showed itself. In about three hours, the cathartic commenced acting, and continued to do so tolerably regular several days. The amendment slowly progressed to the restoration of perfect health, with the exception of mental alienation, which was first developed at the time the case had every appearance of being in the most convalescent condition. This finally gave way under the prescription of a well regulated, nutritive diet, warm stimulating baths, morning

and evening, and mercurial cathartics once in the twenty-four hours.

Although I have frequently administered the turpentine, I do not recollect that it ever before displayed such stimulating effects within my observation, as it manifestly did in this case. The patient, a very intelligent lady, upon recovering her speech, described the feeling experienced, as being a strange sensation—it pervaded all parts of the system, in a very short time, and she said "it coursed the veins, like a harbinger of relief." The action belonged exclusively to the turpentine, for no other internal stimulant had been given for many hours, and the external excitants had displayed their full action nearly twelve hours previous to the exhibition of this medicine. I am therefore warranted in ascribing the recovery of the patient to the turpentine, since it first restored active vitality to the extremities, produced an equable distribution of the blood, by its stimulating powers, and then maintained this change by its purgative and dieuretic action.

SIXTH—SINGULAR AFFECTION OF THE BLADDER.

Prof. Cooke, is in the habit of mentioning in his lectures, the good qualities of an empirical preparation called an anti-lithic paste, which he thought of much value in certain forms of diseased kidney and bladder. He remarked that he had frequently used it, and often with very beneficial results. This testimony was sufficient authority with me for administering it, whenever an opportunity should present itself, and such I met with in the following case.

William Dye, an engineer, was attacked with a violent chill, followed by fever, of the grade usually called "bilious," which terminated in three or four days in convalescence. After remaining in this state for several days, he was suddenly seized with severe pain in the back, sick stomach, and an excruciating pain in the glans penis resembling that complained of, in stone in the bladder. Though a man of more than ordinary fortitude, and capable of enduring a great deal, his shrieks were of the most agonizing character. The calls to urinate, were almost constant during two days and nights, and but a drop or two of water, passed at a time, and gen-

erally he was unable to discharge any. Local bathing was resorted to, and persevered in for about thirty-six hours, anodynes, purgatives and emetics were all administered freely, and all failed to mitigate the symptoms in the slightest degree. The sufferings of the patient had now become so intolerable, that he repeatedly expressed a wish for death—he had not closed his eyes for sleep, since the onset of the attack, and he was almost worn down, with intense suffering and privation. At two o'clock, A. M., the second night I was called out of bed to see him, his family being under the impression that he was dying. I heard his screams some time before I reached the house, and when I entered his bedchamber, the symptoms described above, were found in full force with a considerable increase of debility. Under these circumstances I determined to try the use of the above paste, and gave him a piece about the size of a nutmeg. I remained in the room about half an hour, and left him easy, and returning in about three hours, was pleased to learn he had slept nearly all the time after I left the house—he was in a sound sleep at my arrival, and under the use of the paste, three times a day, remained entirely relieved from his distressing symptoms. The bladder acted freely in a few hours after the exhibition of the medicine, and the pain in the back then ceased.

Since that time, I have used this anti-lithic paste* in several similar affections, and have always been gratified with its results. Nor is its beneficial action confined to the relief of the bladder alone, as its name imports, but it exercises considerable influence upon the chronic affections of the mucous membrane, in all its ramifications. There is a

*We subjoin the Recipe for the preparation of this Paste.

℞. Castile Soap, - - - ℥iv.
Spermacetti, - - - ℥viij.
Ven. Turpentine, ℥vj.
Ol. Anniseed, - - ℥iij.
Turmeric, - - - - ℥ij.
Honey, Q. S.

Rub the soap and spermacetti well together, then add turmeric, after rubbing them well, add turpentine and ol. anniseed; and sweeten with honey.

species of hoarseness, which sometimes almost approaches aphonia, being generally the remains of inflammatory action about the glottis, which readily yields to the influence of this remedial agent. From not a limited experience in its administration, I cheerfully bear testimony to its good qualities as an agent of relief in several varieties of diseased bladder, kidnies, and throat.

SEVENTH.—THE EFFECT OF YEST AS A REMEDIAL AGENT.

The beneficial properties of the yest, in certain ulcers, and other "solutions of continuity," have been long known to the profession, but its powers in other forms of disease, are not as well known, nor are they sufficiently appreciated. My attention to the yest, was first directed by Dr. Galt, through a very scarce and valuable work, entitled "Thornton's Medical Extracts," in which there is a letter from an English Clergyman, detailing the treatment of a number of cases of typhoid disease, with the internal administration of yest. There was in the letter, such a spirit of ingenuousness and honesty, and such an absence of every thing like partisan feeling and boasting, that his statements won my faith. This Clergyman had been thrown into an impoverished parish, and having a small stock of medical knowledge, he determined to expend it upon the afflicted poor in his neighborhood. We shall detain our readers with but a single case, abstracted from his letter.

The son of a poor widow had been attacked with typhoid fever, and the clergyman called to see him. The symptoms were of a malignant type, and the case made no improvement under the remedies advised by the Divine, but on the contrary grew worse. Finding this state of things, in one of his visits, he directed his attention to the mother, in endeavors to console her under the threatened affliction, and while standing near the fireplace, discovered a tub of wort in a state of fermentation. The thought struck his mind, that inasmuch as the wort was known to check putrefaction in meat, and considering this a case approaching that process in many of its characters, he determined to resort to its use, more as a forlorn dependence, than with any hope of benefit.

He accordingly gave the child a table-spoonful of the wort, and directed the mother to repeat it every two hours as long as the child could take it. He left home early next morning, and upon his return after an absence of several days, inquired of his family about the death of the child—they had heard nothing of it, and he went over to the house to see the mother, whom he expected to find childless. He knocked at the door, and after waiting a considerable time, it was opened, much to his surprise, by his little patient. Upon inquiry he learned that the child had improved from the time he had left the house, the insensibility, loss of speech, dryness and blackness of the tongue, weak and rapid pulse, all having disappeared under the use of the yest.

This gentleman mentions at the close of his interesting letter, that he had treated fifty-eight cases of this typhoid fever with the yest, and they all recovered. And reposing my confidence upon his statements, together with Dr. Galt's testimony corroborating them, I determined to resort to the yest, the first time a case should present itself. The following is the first, in which I used it:

On Christmas day, 1835, Miss E. F., aged 13 years, was taken violently ill with congestive fever. There was great burning and tenderness in the abdominal region, cool extremities, violent pain over the eyes, difficult breathing, weak and quick pulse. These symptoms indicated the necessity of an endeavor to equalize the circulation, which was only partially successful under the application of sinapisms, and the usual internal means resorted to in such cases. Various measures of relief were unsuccessfully attempted, and on the 9th day of her attack, I requested Dr. Galt to meet me in consultation. We continued the treatment, she had been under several days, with the addition of a blister over the abdomen, but the patient grew worse, and at the end of the second week of her attack, commenced purging blood, under which she rapidly sunk. In this state of things we began with the prescription of yest and charcoal, giving a table-spoonful every two hours. In a few hours, the bloody purging ceased, and she revived greatly by the following day.

The medicine was continued several days, and with the addition of nutrientia and mild purgatives she recovered finally, after lingering through many weeks. The effect of the yest however, was so striking and beneficial, that it induced me to try it in the case detailed below.

A child of Mr. Kitchen, was attacked with fever, of a remittent character, which assumed malignant symptoms on the second day. At the evening visit, I found it laboring under difficult respiration, tumid abdomen, great thirst, dilated pupils, injected conjunctiva, black and dry tongue, and vitiated intestinal secretions. I had no hope of breaking up this group of symptoms by any course of treatment, but advised the use of the yest, every two hours as long as the child could swallow it. It took it throughout the night, and in two or three days was entirely relieved.

It is unnecessary to swell this paper with more cases of this description, for I have used it frequently with the happiest results. What may be its *modus agendi* I am not prepared to say, and this is not the place to enter the field of conjecture about such matters, and therefore, I shall content myself with the simple statement of the truth already detailed.

But its control over that form of salivation, which usually presents itself in children, is among its best properties. If used as a wash by the mixture of water with the stock yest, and the application of the yest itself as a poultice to the inside of the mouth, benefit may be confidently expected, and this is my usual mode of employing it in such cases. It has rarely disappointed me in the management of these distressing accidents, and I recommend it as a most valuable medicinal agent.

Thus far, I have endeavored to present matters of practical importance, in order to mark certain aberrations from the usual routine of symptoms, and to exhibit the striking effects of several agents of the materia medica. That they may be useful, is my sincere hope, and I trust that practitioners of medicine will feel themselves bound to report, for the benefit of the medical community, all such cases as are unusual in their character, and calculated to improve the principles of

the science. If we all engage earnestly in the work, much may be done for medical science in the west, and the interests of suffering humanity, must be thereby greatly benefitted.

It is hoped the report of the following case, will not be looked upon as doing violence to any of the principles set forth in the prefatory remarks of this paper. It possesses interest as a singular case of parasitic growth, and deformity. It is given in the words of the medical gentleman, who was polite enough to furnish me with the report:

A Remarkable Case of Deformity. By Dr. NATHANIEL FIELD, of Jeffersonville, Indiana,

On the night of the twentieth November I was called to attend Mrs. C———, who was then confined with her first child. During the summer and autumn she had suffered severely from intermittent fever, and at the time of her parturition was in bad health. Upon examination I found the presentation natural. After the lapse of five hours from the time of my arrival, she was safely delivered of a male child exhibiting the following appearances:—about two inches from the abdomen there was an expansion of the umbilical cord which appeared to lose itself in the abdominal parieties, forming a sort of ring of five inches in circumference, immediately below the termination of the cord and apparently unconnected with it there was an encysted tumor of the size of the child's head. The fluid which it contained was perfectly transparent. At the base of the sack, occupying nearly two-thirds of the abdomen there appeared to be a second ring distinctly formed by the junction of the membrane enveloping the fluid, with the coats of the abdomen, in every direction from this second ring the skin appeared flaccid. When the child inspired, the tumor would become extremely tense, and the reverse when it expelled the air from its lungs. The feet of the child, resembled two hands attached to the tarsus. If it had lived, it would have walked, had such a thing been practicable, upon the points of the toes. But fortunately for the infant its birth was premature. It survived only about twelve hours. Respectfully, NAT. FIELD.

Having set out in this paper, with the purpose of endeavoring to improve in some degree the practical department of our profession, we cannot do justice to its conclusion without calling the attention of the junior members of the noblest art in nature, to a few reflections, which naturally present them-

selves in connection with this subject. The prize of distinction, the guerdon of the world's esteem, is only to be won by unremitting toil, by severe privations from mere animal pleasures, and the devious road to this proud goal is so filled with difficulties, that we feel disposed to give what aid we can to those youthful aspirants, who have the ardor to strike out, and the energy to persevere, if properly directed in their exertions. It is often the case that those, who attain a merited distinction in the classes, repose upon that meagre laurel, under the fatal impression that they have attained full stature in knowledge—that they know enough, and further exertion is unnecessary. Deep lethargy seizes upon them, and the bright promise of the spring of existence, is withered into a premature "sere and yellow leaf"—they retrograde unconsciously, and when they awaken to the fact, the day is far spent—the night has overtaken them, and their energies are manacled. Against the fatal delusions of ease, we desire to warn the youthful aspirant, and to impress upon him the necessity of bearing up, and pushing onward. And the kingdoms of nature, present no enterprize, crowded with higher and holier incentives to toil, well-directed action, and untiring industry, than the profession of medicine. The best interests of humanity, belong to the responsibilities of the physician, and the most extensive knowledge that he can acquire, is not more than sufficient to enable him to grapple with the difficulties that daily present themselves to him in the exercise of his profession. And these treasures of knowledge must be acquired in the youthful period of existence, when the dormant faculties are just awaking to action, when the warm blood courses its way actively, when the young energies are bursting their fetters, and panting for an object, and the judgment is on the *qui vive* for improvement. If these are permitted to waste themselves in sloth and negligence until maturity has been attained, it is too late to think of redeeming the time. Listen to the testimony of one of the most gifted of the human race: "If it should ever fall to the lot of youth (says Sir Walter Scott in his Autobiography,) to

peruse these pages, let such a reader remember that it is with the deepest regret that I recollect in my manhood, the opportunities of learning which I neglected in my youth; that through every part of my literary career I have felt pinched and hampered by my own ignorance, and that I would at this moment give half the reputation I have had the good fortune to acquire, if, by doing so, I could rest the remaining part upon a sound foundation of learning and science."

This is the language of a man, who through a long series of years, held undisputed sway over a larger empire of affection and taste, than ever fell to the share of any other mortal. The world of literature bowed to the supremacy of his genius, and almost universal acclaim, bespoke the universality of his powers. It is this, that gives so much importance to his noble confession, and renders it a valuable memento to hang before the view of the youthful student, in an effort to stimulate to a steady and well-directed pursuit after knowledge, and it cannot too often be commended to his notice, fraught as it is with admonition of the highest value to all engaged in laying a foundation for future usefulness. If that foundation be broad and firm, there is hope that the superstructure may be noble, imposing and lasting. If application and assiduity shall mark the course of the student, he will avoid this sense of "hampering and pinching"—his autumn will be crowned with clusters of fruit, and the garners of his memory filled with useful experience and valuable acquirements. From this focal point, beneficial influences must radiate for the amelioration of evil.

"Knowledge is power" is an aphorism, concentrating in itself the contents of volumes, and the true wisdom in attaining it, is in cautiously guarding against the inception of any thing but truth. He that possesses it, meets danger with confidence, because he has ample resources for every difficulty that can assail, and that which is perilous to the ignorant, is to the wise one, but the play of affinities. This attainment cometh not for the asking, but by the assiduous cultivation of every power of the mind—no faculty must be neglected, in endeavouring to reach a high perfection. Thus armed and

equipped, he is prepared for every emergency, and is never carried by surprise. The most honorable triumphs wait on such exertions as these, and give security in scenes, where ignorance cowers with weakness, and falls through infirmity. Let it be remembered that the most trivial truth is valuable in its place, and should not be despised for its apparent unimportance, for the experience of every man who has engaged extensively in the affairs of life, will bear testimony to the fact that principles deemed trifling in the closet, have been called, at an unexpected moment, to play a conspicuous part in the actual drama of life.

If such be the character of wisdom, in the various affairs of this life, their importance is greatly enhanced to the physician, by the interesting relations he sustains to the dearest interests of humanity. The deep responsibilities of his station, its intimate connexion with the holiest and purest affections of our nature, the necessity of an intimate knowledge of all the details of a thousand various matters, and the baleful influence of a single mistake, all speak imperatively of the necessity of an unabated zeal in the acquisition of knowledge on the part of the physician. Laziness in a physician, should be a solecism, as every incentive that can spur to action, belongs naturally to his art, and why should any one fall below his proper level? The great store-house of nature—her universal domain is the nursing mother of medical philosophy, and therefore all truth is tributary to it, and the sun of every science throws its rays of light upon the principles, reasonings and axioms of the healing art. Hence it will be readily admitted that this mutual dependence upon each other, and general interchange of strength, aid and support among the truths of science and philosophy, demands the cultivation of a general acquaintance with all.

We would therefore earnestly recommend to the junior members of the profession, while moulding themselves to the pursuit of usefulness, and forming their characters as philosophic physicians, a careful cultivation of their reasoning powers, and they will then be prepared for observing the facts of nature with advantage to themselves and others. A few facts

carefully reasoned upon, are of more service than a thousand, imprudently managed, and it should be the constant aim of the medical philosopher, to draw as large a revenue of good from every thing presented to his observation, as the powers of the mind, can extract from it. The necessary result of such an exercise of the thinking powers, must be improvment, and we submit these reflections to the readers of the "Journal" in the hope that they may awaken some to action, cause others to observe closely and think with clearness, and conduce to improved means of alleviating the afflictions and sufferings of humanity.

ART. V. *Fatal case of Rupture of the Uterus, occurring at the fifth month of utero-gestation, with an account of the post mortem appearances;* by LEWIS ROGERS, M. D., of Louisville.

The case, detailed in the present communication, occurred in this city in the year 1834; and as affording a specimen of morbid anatomy somewhat rare and interesting, if not practically useful, may deserve to find a place in the records of curious phenomena. The patient was a female slave, near thirty years of age, belonging to a gentleman of Louisville; had generally enjoyed very excellent health and was the mother of four sound children. At the period of her last attack she was supposed to have advanced to the fifth month of utero-gestation; for several days antecedent, some trivial complaints were heard from her, indefinite in their character, pointing to no local affection and scarcely exciting the attention of her owner, all was passed by as some transient ailment incident to her pregnant condition. On the afternoon of the 26th August, she walked to the river, a distance of nearly a mile, and on her return homeward, was suddenly and without evident cause, attacked with severe and subduing pains in the inferior porton of the abdomen; so intensely violent was the

attack, that she was compelled to stop, and remained in the same extreme suffering for an hour and a half; after the lapse of this time, she was able, with some difficulty, to reach her home. In the evening my father saw her and heard from her a history of her past and present condition; he found her pulse but slightly disturbed, and discovered no strong marks of disease in the usual external indications, except the violent pain. Knowing her habits of living and mistaking her attack for one of colic, a prescription of castor oil and laudanum was administered, to be repeated in a certain time, should the first prove inefficient in its action. At 12 o'clock that night he was again consulted concerning her; violent pains of a spasmodic or paroxysmal nature were now complained of, with occasional intervals of entire quietude; the master detailed her symptoms and a prescription was made without seeing her; a repetition of the oil and opiate, with the addition of common domestic enemata, was ordered. From this period her pulse gave way; her extremities became cold with a decided increase of her sufferings. I saw her at 8 o'clock of the morning of the 27th; found her extremities of icy coldness and affected with occasional spasmodic contractions, skin bedewed with copious perspiration, great restlessness and jactitation; countenance expressive of mortal anguish; pulse scarcely perceptible at the wrist; pain in abdomen of violent character, still recurrent in paroxysms; bowels had been copiously moved; directed 20 grs. calomel and 50 drops of laudanum, with dry heat to the surface and mustard cataplasms to extremities. We partially succeeded in restoring heat to the surface, but suddenly her sufferings abated and she became calm; upon closer inspection was found to be rapidly sinking, and at half past 9 o'clock was in articulo mortis.

Post mortem examination at 3 o'clock P. M. On opening the cavity of abdomen, a mass of coagulated blood, exceeding in quantity a half gallon, presented in hypogastric region, completely enveloping the uterus, and diffusing itself largely over the other viscera of the abdomen; the fundus uteri was found ruptured for several inches in extent, from side to side

and slightly upon its anterior surface; at this part an evident attenuation of the substance of the uterus was found to exist; the foetus entirely expelled, covered by sound and uninjured membranes; its position with vertex down and presenting to left side of membranous cavity; uterus contracted and unyielding to the touch; neck and os tincæ as usually found at this stage of gestation; no traces of inflammation, ulceration or other lesion discoverable about the ruptured portion or in any part of the organ; peritoneum and internal and external parts of the abdominal parietes free from perceptible injury; cause of death sufficiently palpable; no other parts of body dissected. A wet preparation of the uterus and the expelled foetus and membranes, together with well executed drawings representing anterior and posterior views of the same, has been preserved and is to be seen.

At the full term of gestation and during the process of parturition, the occurrence of rupture of the uterus is an accident of sufficient frequency and danger to guard the intelligent and cautious practitioner against the operation of those causes which may expose his patient to so serious a casuality. At this period, rupture of the uterus may be induced in several ways; the structure of the organ may be preternaturally thin in some part, and especially near the junction of the uterus proper with the vagina. Supposing such an unwonted attenuation to exist, it may be readily understood how even the ordinary action of the uterus may produce this disastrous accident, by bringing the weak point in powerful and sudden contact with either the hand of the practitioner rudely introduced for the purpose of turning, or with the blades of the forceps or other instruments unskilfully applied, or even some salient point of the child, when the os uteri remains undilated and the soft parts preserve unyielding rigidity. For still stronger reasons would this rupture be likely to occur, when the contractile power of the uterus is goaded into permanent and forcible action, by a remedy too often unwisely used to hasten the seemingly tardy operations of nature.

From this agency of extraneous injuries, or from the translation of inflammation from some other organ to the uterus,

or by the influence of causes not to be traced by the most accurate investigation, inflammatory excitement may be awakened, which in the course of time may bring on the ulcerative process and thus lay the foundation of rupture when labor shall commence; in like manner, this same inflammation may lead to an alteration of structure very frequently observed in other organs, a softening without absolute solution of continuity, which will yield to the feeblest efforts of the contractile power of the uterus and expose the patient to all the hazards incident to rupture of the womb. In the case presented above, the most remarkable features of the rupture were, the early period of gestation at which it occurred and the apparent absence of sufficient causes for its production. The manner of its production can only be accounted for, by supposing that the attenuation remarked in the post mortem examination and known to engender such a liability in the advanced periods of pregnancy, predisposed to the accident here; whilst the long walk under a burning sun, or some other cause, apparently trivial and unobserved, may have excited the uterus to abnormal action, which exerting its force upon a part more yielding than the natural outlet, protruded the fœtus and its membranes into the cavity of the peritoneum.

It was said that several days prior to her death, she was engaged in a quarrel with her husband, and it was not improbable that a blow might have been inflicted by him, upon her abdomen; such, however, was not known to have been the case, and the uninflamed condition, both of the uterus and the walls of the abdomen, precludes the supposition of such a cause; neither inflammation, ulceration nor softening of structure was admitted by the several learned gentlemen, who assisted in the autopsy. The patient evidently died from the exhaustion consequent upon the loss of blood and the great irritation which ever arises when a foreign body comes into contact with the delicate sensibilities of the great serous cavities.

ART. VI. *A Discourse commemorative of Philip Sing Physick, M. D.; prepared by appointment of the Faculty and Class of the Louisville Medical Institute, and delivered January 12th,* 1838. By CHARLES CALDWELL, M. D.

Gentlemen of the Medical Faculty and Class,
and fellow-citizens of Louisville:

The event which has this evening called us together, will be memorable in the medical history of our country. Nor will it be denied a place in the history of the Profession in any country, where worth is esteemed, talents and public services admired and respected, and medicine cultivated as a liberal science. In diffusing the knowledge and perpetuating the remembrance of it, and in thus practically testifying to the importance attached to it, Europe will respond to the voice of America; and hence will the announcement of it be echoed from nation to nation, until its registry shall be co-extensive with science and letters, and constitute an article in the history of the age. Such at least in justice ought to be the promulgation of it; and I admit not a doubt, that justice will be rendered.

That no one under the impulse of the moment, and uninformed of the circumstances of the case, may regard these remarks as fanciful or extravagant, I hasten to lay before you a brief exposition of my reasons for offering them. And on that I shall securely rely as my defence against suspicions of partiality or exaggeration.

The event referred to is the death of an individual, who has long stood unrivalled in one of the most arduous and important of callings. And while he was pre-eminent in many other excellencies and virtues, he was as free perhaps from faults, as, in the rank he occupied, the sphere he acted in, and the scenes through which he had passed, comports with the imperfect condition of our nature. In proof of the claim which this visitation has to a place in the history of medicine, in every portion of the cultivated world, I proceed to give the name and character of the deceased.

Physick, whose professional sagacity and skill have, for nearly half a century, presented, in cases almost innumerable, the last glimmerings of hope to afflicted humanity; and who has been hailed as the medical savior of thousands, where even hope itself was extinguished, and the grave perhaps longed for, as a refuge from suffering—Physick, who has thus been distinguished among the most distinguished of professional luminaries and benefactors in practice, has closed forever his earthly labors, and passed to his reward.

On the annunciation, through private letters and the public prints, of this dispensation, involving to medicine and our country so signal a loss, resolutions were entered into and measures adopted by the Faculty and Class of the Louisville Medical Institute, to commemorate, by a discourse prepared for the purpose, the invaluable services and character of the deceased. And the chief ministry in the ceremonial resolved on was devolved on him who now addresses you. But, when referring to myself, I must continue to speak in the first person.

That I am sensible and even proud of the distinguished and flattering appointment thus conferred on me, notwithstanding the melancholy remembrances it awakens, is true. To be the commemorator of Physick, in his career of professional benefaction and greatness, could the high office be competently performed, would be honor sufficient to gratify the reasonable cravings of any writer or speaker for distinction and fame. At least it would be competent for the present to gratify mine.

The appointment however, gratifying as it is to me, has brought with it a task of manifold and inordinate difficulties. Of these, one in particular has so seriously embarrassed me, as almost, at times, to paralyze my resolution and extinguish my hopes. It is a want of the materials essential to the enterprise in which I was engaged. And throughout my preparation for this hour, from beginning to end, that want has been, more or less, an incubus to my pen.

Remote from the spot of the residence of Physick, the field of his labors, and the place of his death, and having had

neither time nor opportunity to receive from thence a tittle of information, my only facts and documents on the subject, have been the traces on the tablet of my own memory. And most of them were imprinted there a life-time ago. Years, therefore, united to travels and their oblivious accompaniments and effects, new pursuits, perplexing cares, and engrossing occupations, have done their work, in dimming most of them, and effacing many. To these privations and impediments, add the pressure of my official duties, and their engrossment of my time, and it will clearly appear, that my means and resources for doing justice to either my subject or myself, could have scarcely been rendered more scanty and insufficient than they were, during the process of my preparation for the present occasion.

True; I was intimate with Physick, and in habits of intercourse with him, for more than twenty years. But, when together, the themes on which we exercised our minds, were other than the incidents of either his life or mine. They were almost exclusively professional and scientific. And even on them, his words were usually few, and his communications limited. For he was in most cases as little of a colloquist as of an egotist. And he never spoke of himself or his own affairs, except on the ground of business, as the result of some emergency, or by particular request. In as high—perhaps a higher degree, than any other person of an active and vigorous mind, united to great intelligence I have ever known, he was a man of action, rather than of expression. Were I to allege, that in too many cases he was far more reserved and incommunicative than he should have been; and that he thus concealed his instructive and valuable doings and thoughts, when he ought to have divulged them—(never though from an improper motive, but simply as the issue of his taciturn habit and unostentatious disposition)—were I to make this charge, if so it may be called, it could be easily sustained. It was indeed one of the strong-lined features of his character; and one of the very few of them that might have been advantageously changed. Admitting these peculiarities however to have been defects, or even faults, they were in him

but as the noddings of Homer, or as specks on the sun. To contrast them with the lengthened catalogue of his great and good qualities, was to obliterate them. That they have aided in impoverishing the tribute I am now about to pay to his memory, and in rendering it less creditable to myself, than it otherwise might have been, is true. Of that however I make but little account. Entire justice will be done to his character, by other pens, supplied more amply with suitable materials, and exercised under better auspices; and that will fill up the measure of my wishes. Or if there remain a consideration that still gives me concern, it is that you will not receive this evening, in favoring me with your attention, the rich and rare repast of mind, which the theme would afford you, were it competently handled.

So limited is my information on certain points of my subject, that I cannot state with positiveness either the place or the time of Physick's nativity. That the former was Philadelphia, and the latter some month, week, and day of the year 1767 or '68, I have indeed a strong belief. Whether this belief however be well or ill founded, is of no moment. In many cases fragments and fractions are not merely unworthy of notice. Even a glance at them may do mischief, by abstracting the mind from superior concerns. In the admeasurement of a mountain, the projection of a pebble or a molehill is disregarded. Physick's being and history, in like manner, were not an incorporation of specks in place, and points in time. No; he was a man, not of years and cities, but of ages and nations. Like Washington, (for, in the United States, he was in the Healing Art, what Washington was in policy, patriotism and war)—like Washington, he was born *in* his country, and *for* his country; like him he labored to serve his country immediately, and the world indirectly; like him he died, and left no equal behind him; and like him he descended to the grave, crowned with the gratitude, applauses and blessings of thousands whom he had benefitted, and with the esteem and admiration of all to whom his character was known. Nor do I now for the first time express this sentiment. I asserted many years ago, in a conversation with Dr.

Rush, and now repeat, that, in one respect, already referred to, Washington and Physick were identified in standing. They were the only two personages in their native land, whose places, at their death, could not be supplied. Each in his own sphere was peerless.

Physick was the descendant of an English family. His father, who was, if I mistake not, a native of England, held for a time, in Philadelphia, the appointment of agent to some of the Proprietary families of Pennsylvania—the Penns, their representatives, or heirs. He died in the early part of the present century, at an advanced age, leaving to his son a valuable estate. In his constitution and its changes, he may be said to have been somewhat of a second Cornaro. Until the age of forty, he was a valetudinarian, pale in complexion, and meagre in form. About that period his health became sound, his countenance fresh and ruddy, and his person sufficiently rounded and full; and by temperance, strict regularity of life, and other well directed precautions, they continued so, until about his eightieth year, when he died of an acute disease. His old age had nothing of winter in it, corporeal or mental, except the snowy whiteness of his hair. Exempt in a high degree from the infirmities and sufferings of human nature in decay, it was vivid, and green, and summer-like until its close.

Of the early history of Physick, his childish gambols, his boyish freaks, his horn-book-labors, and his habits of lesson-learning, I am uninformed. Nor do I know any thing worth relating, of the extent or variety of his academical studies, the measure of his industry or idleness in pursuing them, or of his progress at that period in his attainment of letters. These again are matters, which had, it is to be presumed, but little influence on his future life. He was not formed to rise on academic stilts. In his ascent to the distinction which awaited him, he drew his means much less from the products of the press, than from the resources of nature. Nor is it known that any event, in his scholastic career, was at all indicative of his subsequent renown.

I believe he was a college pupil of the University of Pennsylvania; and I know that whatever he learnt, whether

there or elsewhere, he learnt thoroughly. Accuracy and precision in all things were among his ruling characteristics. They seemed incorporated with his existence. His intellectual attainments therefore, instead of being only loose immature information, were well defined and well digested knowledge. And such must be the attainment of a physician; else he will never become eminent and successful in practical medicine. The only sure guaranty of accuracy in knowledge, is strictness of attention in observing, listening, and reading, united to steadiness and sobriety of reflection. And, in the medical profession, accuracy is the only guaranty of skilful, safe, and efficient practice. For every single student of any branch of knowledge, that fails in accuracy from want of capacity, one thousand fail from want of attention. Hence "attention!" is the first word of command the military disciplinarian issues, in commencing his drill. And were it made the first of the intellectual instructor's drill, the usage might be rendered instrumental in the improvement of the mind.

Having closed his college course, in the prosecution of which he had become sufficiently trained in Greek and Latin, and made satisfactory progress in mathematics, experimental philosophy, and some other branches of knowledge, Physick entered on the study of medicine, about the year 1785 or '86, under Dr. Kuhn, then Professor of the Theory and Practice of Physic, in the University of Pennsylvania. He was now within the limits of his future fame-field, so exuberant in soil, and resplendent in product; and which he cultivated with such assiduity and transcendent effect. In embarking in this new department of study, he left behind him, as his exertions and their success immediately manifested, no fraction of his habits of patience and perseverance, pains-taking and accuracy.

Professor Kuhn, having been a pupil in the Medical School of Edinburgh, at that time the most celebrated institution of the kind in Europe, or the world, had become in all things a thorough-bred Cullenian. To indoctrinate his pupil therefore in the orthodox faith, and imbue him with what he deemed immaculate truth in medicine, he placed in the hands of Physick, with a magisterial air, and under a dogmatical encomium

transcripts of nature, and contain a much more abundant proportion of solid and available matter, than those which had appeared at an earlier period. Hence, while the latter are only consulted, let the former be studied.

Without intending the slightest censure then, on our predecessors in teaching, I say distinctly, that most of the hours of a student of medicine may be much more rationally and usefully employed, in other forms of research, than in wading, chin-deep, through the professional lore of ancient times—or even of modern times, a century ago. The Book of nature, the unerring source of all science, is immeasurably better understood now, than it was even in the times of Cullen and the Monros. On the careful and judicious exploration of it, therefore, too much time can scarcely be bestowed, by the votary of medicine.

During a period of three or four years, Physick toiled with industry and ardor through the scheme of study assigned him by his preceptor, and was an accurate and an indefatigable observer of all that was to be seen in the Pennsylvania hospital. He listened also to the lectures in the Medical Department of the University of Pennsylvania, Shippen, Rush, and Kuhn making part of the Faculty, and giving character to the institution. He was not however graduated in that School; conceiving as he did that his education was yet too limited and immature. For now, as afterwards, entire ripeness and high effect were the objects of his ambition. The ascent however to the doctorate, in the Philadelphia School, was open to him; for he stood, as a pupil, in the foremost rank; and his attainments were at once substantial and practical. He never speculated on disease either in early, or in after-life. He examined it closely, judged of it calmly, and practised on it boldly—always making the two first processes subservient to the third.

That his education, finished under the ablest teachers, and amidst the amplest advantages, and the most instructive means and models, which the condition of medicine at the time afforded, might be carried to the highest attainable perfection, he sailed for Great Britain, about the year 1788 or

'89. The many celebrated members of the medical profession, whom he now found around him, and the crowds of high-gifted and aspiring pupils with whom he soon came into contact, acted as incentives on his ambition to equal or surpass them, in the career that lay before him. He accordingly prosecuted his studies, with fresh-kindled hopes, and renovated ardor, availing himself of every opportunity to improve. He sought and obtained an acquaintance and intimacy with several distinguished practitioners and professors, and profitted by their conversation, example, and practice. Having received the degree of Doctor of Medicine, from the University of Edinburgh, after complying with the several high requirements of that institution, he repaired to London, and became a house-pupil of John Hunter, the foremost practical anatomist of the age, and one of the ablest physiologists, and most accomplished surgeons of any age.

Finding himself now at the very fountain of his two favorite branches of knowledge (for such were anatomy and surgery to Physick) he resolved to make his power to appropriate and profit by the fruitful waters of it, the only measure of his participation and use of them. And that resolution, so praise-worthy in itself, and whose ultimate objects were beneficence and fame, he executed to the letter.

Urged to action and attainment, by the industry, ardor, and perseverance of Hunter, which had never been surpassed in intensity and productiveness, and were therefore to youth of so salutary an example, the pupil soon became, in these respects, the rival of the master. Pleasure and amusement were abandoned and forgotten by him. I should rather perhaps say, that uninterrupted labor and study became to him the synonyme of both. Early morning, high noon, and the time-stroke of midnight found Physick in the office or the amphitheatre of his preceptor, executing all his directions and wishes, and anticipating many of them. This untiring devotion to practical attainment, accompanied by a mind peculiarly adapted to it, rendered him, in a short time, not only a favorite but a confidant of Hunter. He had accordingly intrusted to him the superintendence of many experiments, in

on them, Cullen's "First Lines of the Practice of Physic," in four volumes, of no inconsiderable size, with an injunction, not to be appealed from, to make himself master of them.

Determined already on efficiency and distinction in the profession he had selected (and such determination rarely fails in the attainment of its end) and believing a spirit of docility and a faithful compliance with his preceptor's directions to be essential to his purpose, the pupil entered resolutely on his task. And so literally did he accomplish it, as to transfer not only to his common-place book, but to the pages of his memory, the entire contents of the four volumes. In plain English, he committed to memory the whole of Cullen's "First Lines of the Practice of Physic." This anecdote I received from himself. And his word was truth. Nor was this all.

The period I am alluding to was, in the true and emphatic meaning of the expression, the age of reading. The study of medicine, then, was no child's play. It might almost have constituted a *thirteenth* count in the labors of Hercules. The ransacking of libraries, and the evisceration of books, (many of them huge folio-volumes) exacted of pupils at that time, were abundantly awful. At least they would be so considered at the present day, when every thing must sweep ahead, some twenty knots an hour, by steam and rail roads. Even in after years, when I commenced my professional studies, it was required of me that, digest them as I might, I should swallow tome after tome of medical lore, which now lie, unopened and dust-covered, on the shelves of libraries.

In conformity to this book and brain and patience-consuming scheme of instruction, Physick was soon afterwards directed to achieve another merciless task—the mastery of Van Swieten's Commentaries on Boerhaave's Aphorisms, in eighteen closely printed volumes. Then came the works of Hoffman and Stahl, in seven or eight ponderous folios inhumed in Latin, followed by the erudite and laborious lucubrations of Haller, dimly seen through the same language, and, by dint of German patience and perseverance, hammered out to an equally terrifying extent. In the form of a desert to this

palling and appalling banquet composed of modern productions, which, whatever might be his appetite, or powers of digestion, the student of medicine was expected to consume, to the last morsel—to this modern meal, I say, were added, exquisitely spiced in the ancient languages, the works of Hippocrates and Galen, Asclepiades, Celsus, Dioscorides, and a score or two of other ancient worthies, who had favored the world with their notions on medicine—I say "notions;" for too many of those publications are stored with suppositions and surmises, superstitions and hypotheses, much more abundantly, than with positive facts, sound principles, or precepts valid and available in curative medicine. Yet was an acquaintance with them deemed indispensable to the educated physician, until near the commencement of the present century. Nor do I mean to insinuate that valuable information may not yet be derived from them. Let them still be consulted therefore, as rich repositories of medical history, venerable records of useful facts, and accurate descriptions of diseases and their progress, changes, and modes of termination. But I deny that they are sources of medical science, in the true and most important meaning of the expression. That is found only in modern productions. And by far the most sound and instructive of these, have appeared within the last half century.

Medical books written and published centuries ago, are too many of them but little else than transcripts and fancy-pieces of the dreams and closet reveries of their authors. What facts they contain are buried in the rubbish of superstition and false opinion. Nor is this the greatest evil connected with them. Many of their reputed facts are nothing but fictions and creatures of the imagination, calculated to adulterate the mind of the pupil, which is not yet prepared to distinguish between the real and the fanciful—the false and the true.

With productions in medicine that have first seen the light within the last half century, the case is different. Though far from being entirely free from faults, and fancies, and groundless opinions, they are much more composed of

phitheatre of Hunter, were sown the seeds of the discovery of vaccination by Jenner, and of many improvements in the Healing Art by Physick, with neither extravagance nor a departure from probability could I be rightfully charged. The habits of investigation, and the resolution to excel, created or confirmed in them there, must have clung to them through life, and aided in their future achievement of renown. I shall only add, that whatever might have been the standing of the young Briton, contrasted with that of the American, under the roof of Hunter, the scale of true greatness, in future years, preponderated eminently in favor of the latter. In speaking of it as an event indicative of mind, and connected with reputation, we cannot do more than call the discovery of vaccination *fortunate;* but the contributions to medicine and surgery by Physick, whether spoken of as isolated products, or as manifestations of intellect, must be called *great.* Jenner's discovery was comparatively but *an act,* though an important one. It had in it moreover some admixture of accident. Physick's contributions, on the contrary, taken in the aggregate, amounted to *a work,* which, were all the elements of it collected, and skilfully arranged, and the whole presented to the world, in an embodied form, would be called perhaps *gigantic.*

But Physick unfortunately did not write. He did not I mean make full and faithful records of his own professional performances and thoughts. Hence the misfortune to his memory, that justice can never be done to his labors. This sentiment I do not now utter for the first time. I have repeatedly and earnestly pressed it on himself. I have even charged him with inexcusable and manifold neglect on the subject—a neglect involving injustice to his own reputation and standing, to the reputation of his country, and to the interests of medicine. My remonstrances however were unavailing. On the score of personal reputation he felt no solicitude. On that point therefore he was immovable. And his modesty rendered him blind to what was abundantly clear to every body else—that a record of what he had done in the profession was calculated to advance to a great extent

the interests of medicine; and that his fame was identified with the fame of his country. Such are some of the causes that have withheld from the world a knowledge of his contributions to the Healing Art. Another hindrance, and its influence is powerful, was feeble health. For thirty years of his life, he was a valetudinarian.

About the year 1789 or '90 (for here again I am without dates) Physick returned to the United States, where new and higher honors awaited him. They were not however immediately bestowed. Justice, with whatever certainty she reaches her object at last, often travels slowly; while injustice and mischief too frequently fly on swallows' wings.

With my present topic is connected an interesting portion of Physick's history, which should be held in remembrance by young physicians, who are ambitious of the honors and emoluments of their profession. In two very important points it offers them instruction, as well as encouragement under the neglect and want of patronage they may be doomed to encounter. It gives them a pledge which is uniformly redeemed, that full and ripe accomplishment in practical knowledge, accompanied by good conduct, and steady perseverance, never fail to command professional business at last, even under auspices the most adverse and unpromising; and that, to young practitioners who are worthy of them, accident, judiciously improved, not unfrequently opens the door to fame and fortune.

In illustration of the first of these positions, and in evidence of its soundness, let me communicate to you, in Physick's own language, the account he once gave me of the deep and portentous cloud that hung over the morning of his practical career. "I walked the pavements of Philadelphia," said he, "after my return from Europe, for nearly three years, without making as much by my practice, as put soles on my shoes." In plain terms, without making any thing. And, he continued, "such were my discouragement, and dissatisfaction, that I would have sold the fee simple of my profession for a thousand pounds, retired into the country, become a farmer, and never again have felt a pulse in the capacity of

which that great man was engaged, but had not time to conduct them in person, and of which he did not wish the public to be apprized, until their issue should be known. This was to the pupil an abundant source of gratification and improvement. Without making him vain, it rendered him proud of his standing, and of the confidence reposed in him, by one of the most illustrious men of the age, and confirmed his resolution, were confirmation wanting, to deserve and maintain them. To things which might have arrested his attention at any time, he was doubly attentive now. Remarkable for accuracy, as he had always been, this rendered him still more accurate. A disposition to exactness became one of his ruling passions, and incorporated itself in him as a part of his nature. This at the same time improved his *habits* of research, and added to his *knowledge*, and rendered the *former* the better fitted to minister to the latter, in other scenes, and in after years. For to strengthen and confirm the habit of acquiring knowledge, is tantamount to the acquisition itself. It stands at least its certain guaranty. He therefore is the most skilful and useful teacher, and contributes ultimately in the highest degree to the improvement of his pupils, who best instructs them in the method, and most effectually matures in them the habit, of improving themselves.

All the sources of improvement however which Physick enjoyed in the house of Hunter, have not yet been made known to you. National pride and manly competition came in for their share. Jenner, the subsequent discoverer of vaccination, and the Hercules who, if he did not destroy the Hydra of small pox, disarmed it of its terrors, by throwing his shield over its intended victims, was Physick's fellow student, and worthy to be so. And the pupils were friends.

Here, on an abridged scale, but free from the evil passions that had accompanied it, was waged afresh the conflict between the mother country and her colonies, which had recently terminated in the triumph of the latter. It was now Great Britain and the United States in the lists against each other, in the persons of two young men, an American and an Englishman, each holding his life of no value, contrasted

with his own honor, and the honor and intellectual reputation of his native land. The strife was long, and ardent, and obstinate, and for a time perhaps doubtful. Hunter perceived and encouraged it, but maintained in relation to it a strict neutrality. While he furnished to each, with perfect impartiality, materials and opportunities for the contest, he aided neither—or he aided both alike. Such were his justice and magnanimity, that he would not swerve from duty, to favor his young countryman in preference to his rival; and such was the manliness of the youthful Briton, that he would have promptly, perhaps indignantly rejected the favor, had it been proffered to him.

It was during this competition so ardent and honorable between the two rivals and friends, that, by direction of his preceptor, Jenner inquired into the history of the cuckoo, and proved it definitively to be a bird of passage, by ascertaining the place of its winter residence, and all the circumstances of its vernal return. Previously to this the habitudes and movements of that bird were not fully understood by the best informed naturalists. Even with them its history was in part conjectural, if not fabulous; and, among the populace, sundry superstitions, and whimsical notions respecting it almost every where prevailed. To counterbalance this contribution to science, Physick made several of the interesting discoveries, and not a few of the exquisite preparations, in anatomy and physiology, which now enrich the Hunterian Museum, and render it at once so splendid and instructive.

To which of the two competitors Hunter secretly adjudged pre-eminence, or whether decidedly to either, was never known. On that point his delicacy kept him silent. On both he passed high and flattering encomiums, and was often prophetic of their future eminence; but gave to neither a preference in words. Be the case however of their comparative success and merit as it may, that each was improved by the trial, far beyond what he would have been without it, cannot be questioned. One of the most productive sources of youthful advancement in excellence and accomplishment, is high-minded competition. And were I to allege, that, in the am-

a physician." In verification of my second position, permit me to add, that, from this discouraging condition, when he had begun to consider it almost hopeless, accident, at length, did much to rescue him; and to illustrate the case, by a brief narrative.

Dr. Rush, being no surgeon, had for several years, given to Dr. Wistar such cases in surgery, as had occurred in the families, to which he himself was physician in ordinary. During the prevalence of yellow fever in Philadelphia, in 1793, a misunderstanding fell out between Drs. Rush and Wistar, in consequence of which all intercourse between them, social and professional, was forever closed. On the occurrence of this breach, it became necessary for Dr. Rush to engage another surgeon, to perform for him the services, which he had previously devolved on Dr. Wistar. And, with that penetration and sagacity in all things connected with medicine and the human character, which so eminently distinguished him, his selection fell instinctively on Physick. This gave the latter an immediate introduction to business, its concomitants and consequences. A selection and recommendation of so high an order, and unquestioned authority, were his passport to practice, and ultimately to fame. Nor was the connexion thus accidentally formed, ever severed, or in any way interrupted, until the death of Dr. Rush. In the whole of his conduct subsequent to this connexion, Physick set an example worthy at once of recital and imitation. He proved himself to be not only possessed of unwavering grati tude; but to be also actuated by that pure sentiment of honor, those solid principles of justice and rectitude, and that refined and delicate feeling of courtesy, which should characterize the professional intercourse of physicians; and which does characterize it among such of them, as are of well organized minds and gentlemanly breeding. When he was introduced by Dr. Rush to a case of surgery, questions, in the course of his attendance, were frequently put to him, respecting the indisposition of other members of the same family. But, unless the complaint were surgical, they were put in vain. He never replied to them in any other way, than by

an intimation that the case belonged to Dr. Rush; and that, if advice or medicine were required, they ought to come from him. And especially that, beyond all others, he himself could not interfere to the prejudice of a man who had reposed confidence in him, and bestowed onhim many distinguished favors. What a contrast is this with the intrigues of physicians (or of men who unworthily call themselves so) to supplant each other in family-practice! and how many feuds and broils would be unheard-of, were all physicians as honorable and conscientious as Physick! From the mercenary practice of huckstering and too often cozening for business, arise most of the disgraceful squabbles, that bring down on the profession the sneers and obloquy by which it is assailed.

To those persons acquainted with the history of the yellow fever of 1793, it is known that, on various points pertaining to it, wide differences of opinion and practice obtained among the leading physicians of Philadelphia. In the contest which ensued, and was carried on by some under the impulse of bitter feeling and unbridled passion, Physick took a firm and uncompromising part. Not however in anger, nor as a speaker or a writer. In those capacities he did comparatively little. But in the capacity of a practitioner and a man of action he did much. And the course he pursued, and the measures he devised and adopted, were much better calculated than those of any other combatant, to disclose the truth, and decide the controversy. But, as already stated, his war-weapons were neither the pen nor the tongue. They were his lancet, and other remedial agents (for the epidemic gave him business) and lastly his scalpel. In his vigorous and judicious employment of these, not only did he soon become one of the most successful assailants of the complaint; he performed the first dissections and examinations, with a view to the discovery of its seat and character. And he made the discovery. Nor was the influence of his examinations limited either to the city of Philadelphia, or the year 1793. Far from it. The dissections he performed, and the disclosures effected by them, being made known by the newspapers and periodicals of the day, as well as by private letters, and other

modes of communication, similar examinations, followed by similar results, were soon afterwards practised in other places. Hence it became in time a professional maxim, and a rule of practice, that in all cases of death from unknown complaints, information should be sought, by the employment of the scalpel. Nor would it be extravagant in me to assert, that, by inquiries thus conducted, more true light, available in the science and treatment of disease, has been shed on medicine, within the last forty years, than had been during the forty preceding centuries.

From Philadelphia, where it began, the practice of *post mortem* inspection passed to the West Indies; and from thence to Europe; especially to France. The continental war was then raging; and it became a military proverb, that soldiers should fall in battle like heroes—not die of disease like common men. Acting on this principle, Napoleon, whose knowledge on all points which he looked at, had the promptness of instinct, and the clearness of intuition, compelled his medical staff to report to him the reason of the death of his troops, when destroyed by sickness. This soon caused dissections to be practised, and careful examinations made, in the French armies and hospitals. The result proving useful beyond calculation, the practice extended to all other armies, hospitals, and places, and is now universal. And I repeat, that so little had been done in that important mode of research, and so little consideration had been attached to it, that with Physick, in 1793, it may be said to have practically and efficiently commenced. And that alone is sufficient to immortalize him.

Shall I be told that Bonetus, Morgagni, Sauvage, and Lieutaud had practised *post mortem* inspection, and published their works on morbid anatomy, at a preceding period? True; they had. And so had Purgle, and perhaps a few other writers. But it is equally true, that their publications had produced but little effect. Nor is the cause of this concealed. The writers just named had examined chiefly the bodies of persons who had died of ordinary diseases—complaints I mean which every where prevail, and which had produced

on the public mind no deep and extraordinary impression. Hence their works were equally unimpressive, and therefore limited in their circulation, and but seldom read or even consulted by practitioners of medicine. I venture to say, that, throughout the world, not one physician in every five hundred (perhaps every thousand) had ever seen them, or been informed of their existence. Not so however with yellow fever, or aught that concerned it. That pestilence, for a time, spread terror through christendom. Hence the paramount interest which dissections in it excited; and the deep attention they every where commanded. And I repeat, that, as far as my information extends, and my memory serves me, they were first performed by the hand of Physick. And to the unvarying accuracy and discriminating judgment of the same individual are we indebted for our knowledge of the fact, that the matter of *black vomit*, is neither grumous blood, nor vitiated bile, but a peculiar secretion from a dying stomach. And, as respects his connexion with disclosures on the subject of yellow fever, something farther remains to be told.

On two other points in the history and philosophy of that pestilence, controversy was ardent, and obstinate, and angry. I allude to the place of its origin, and the attribute of its contagiousness. Rush declared it an evil of home production, but pronounced it at the same time eminently contagious. In the former opinion Physick concurred with him, but dissented in the latter. He was among the first to contend that yellow fever *was not contagious*, but was propagated exclusively by a distempered atmosphere. That opinion Rush himself adopted subsequently; and it is now universal.

From this period professional honors clustered around Physick, and clung to him through life. What he once gained in standing and reputation he never lost; because he rendered himself by his daily and growing services, more and more worthy of it. So rapidly did his private business increase, that it soon became burdensome to him; for even now his constitution was feeble, and his health delicate; and,

to render his duties the more engrossing, and his toils the more severe, several public appointments, of a professional character, were also bestowed on him. During three or four invasions of yellow fever, which the city sustained, he was one of the physicians to the Philadelphia hospital, the repository of those who suffered from the complaint. This was a post of great responsibility and solicitude, vigilance and fatigue. He soon afterwards received the appointment of surgeon to the Pennsylvania hospital, and discharged the duties of it, with his usual ability, until his declining health admonished him to resign. I need hardly add, that from the general dignity of his character, his acknowledged pre-eminence in that branch of the profession, and the improvements he had made in it, he was already considered, and often denominated the FATHER OF AMERICAN SURGERY. And here let me observe, that the greatest general improvement he made in American surgery, was the change he produced in it from the *operative*, to the *conservative*—from amputating limbs and other parts dextrously, to not amputating them at all. Though no surgeon ever operated more adroitly than himself, or taught the art in higher perfection to others, that was far from being his favorite mode of practice. His principal aim was, to prevent the necessity of operations. And in this his success was pre-eminent. So salutary and striking is the revolution he produced in this respect, that I venture to say that, in a given number of similar cases in the United States, one amputation is not performed now, for every three that were performed at the close of the last century. And the modes and success are improved in perhaps an equal degree, in cases where operations are indispensable. And in this aggregate of surgical advancement Physick was instrumental. If he was not the immediate author of every improvement, the spirit he awakened, and the intelligence he diffused through the profession were in the work. His mind was the leaven that pervaded the mass, and excited it to action.

His fame, as a practitioner, now began to draw patients from all parts of the Union; and while his health remained sufficiently sound and vigorous to admit of it, he made occa-

sionally professional visits to distant places, and operated on those who, from disease or age, or both united, were too infirm to repair to Philadelphia.

The great wealth that Physick acquired by his profession, was a fair measure of the amount of his business. No other practitioner has ever, in the United States, accumulated *by practice* so large a fortune. Yet were his charges as a *physician* exceedingly moderate, not to say unusually low; and I have reason to believe that the same was true of his charges *in surgery*. Nor, to my certain knowledge, was he always in the habit of accepting liberal fees that were offered to him beyond his regular charges, or in cases where he had made no charge. On a point of this description, the following incident occurred between him and myself. And I relate it only in illustration of his character.

Being in attendance on a wealthy kinswoman of my own, in an attack of severe illness, and feeling some solicitude about the condition of my patient, I asked and obtained permission to call Physick in as consulting physician. He visited in consultation with me three or four times, and then discontinued his visits, on the plea of their being no longer necessary.

On the recovery of my patient, she asked me to request Dr. Physick to favor her with his bill for attendance and advice. My reply was the expression of a confident belief that he would make no charge. The lady being high-spirited as well as liberal, declared her resolution not to be obligated to him for services unrewarded. Addressing herself to me, with a look, and in a tone not to be misunderstood or resisted, "your solicitude, said she, about my bodily suffering having led me into this difficulty, I must rely on your kindness, and regard for the ease of my mind and my self-respect, to get me out of it again." She added, with more feeling perhaps than the occasion required; "rather, sir, than lie under such an obligation, I would submit to another fit of sickness twice as severe, as that from which you have just relieved me."

In such a case something was to be done. Yet an intimate knowledge of the parties concerned apprized me fully of the difficulty of a successful negotiation between them. I sug-

gested however to my kinswoman the *possibility*, that, if a fee were enclosed to Physick, in a note of thanks for his services, he would accept it. Eager to avail herself of this expedient, the lady inquired "what amount would constitute a suitable fee?" A pause ensuing, before my reply, she promptly, and with apparent impatience at my delay, asked, "will fifty dollars be sufficient?" I answered, it will be very liberal. "Then, said she, let the matter be settled." Placing in my hand a fifty-dollar note, she added, in a softened tone, "I am weak and agitated; and if I attempt to write, my hand will tremble. Please to enclose this to Dr. Physick, in your own name, saying that I requested you to do so; and thank him in mine, for the services he rendered me." I complied with my kinswoman's request, and returned home.

As I strongly suspected, however, the business was not yet closed. Scarcely had I seated myself in my writing-chair, when, after a sharp ring of the door-bell, a servant ushered Physick into my study, his cheek a little flushed, and his look more than usually intense. Taking him by the hand, I asked him to be seated, when he replied to me, with great quickness, and in a manner not expressive of entire satisfaction, "Thank you, sir, I am hurried, and have no time to sit—what did you send me that fifty-dollar note for?" As some compensation, I answered, from Mrs. ———, for your services to her, in her late sickness. "I rendered her, said he, no services—she did not need any thing beyond what you yourself had done for her, and would have recovered as soon *without* my visits, as *with* them—I will not therefore receive a fee, and must beg you to return the money to her, with my respects, and say so." I attempted to remonstrate, and almost to implore him to alter his purpose—but in vain. He suddenly broke off the negotiation, by placing the proffered fee on my table, with the declaration, firmly pronounced, "I wont have it, sir;" and bidding me "good morning," left the room as abruptly as he had entered it. Nor could any thing subsequently shake his resolution. He made his peace however with the lady, by giving her courteously to understand, that he had visited her as a part of my family; assuring her

that he never took a fee for attendance on the near connexions of his medical friends.

At the commencement of the present century, and for some years afterwards, the organization of the medical school of Philadelphia was imperfect, and its Faculty incomplete. Anatomy and surgery were united, and taught from the same chair, by a Professor, and an Adjunct. This was regarded as a radical defect, and complained of as an incompetent provision for teaching. As a remedy for the evil, Physick was solicited by pupils and junior physicians, and encouraged by Dr. Rush, to open a course of independent lectures on surgery. With this solicitation he complied, about the year 1801 or 2, and lectured in a private capacity to respectable classes (respectable especially on account of their intelligence, talents, and professional ambition) for three or four winters. His ability and rising reputation and popularity as an instructor, soon did their work. They awakened in the existing medical school-faculty an apprehension, that he would become a point of central attraction for the formation of a rival school. And, in a few years, what was then an object of dread, would have been a matter of history. To prevent this, anatomy and surgery, in the established institution, were disunited, and placed under two distinct professorships, in the year 1804 or 5; and, without rivalship or opposition, he was inducted into the chair of the latter. In reality the chair was created for him. Nor would any one have denied or contested the fact, that he honored it immeasurably more than it honored him. His greatness was an attribute of substance, not of show. It required no academical preferments and decorations to increase it. Nor could they increase it. That greatness was in himself, and borrowed nothing by reflection or imbibition from others. It was internal, and stood indebted to externals for neither value nor lustre. Like an electron per se, its light was self-produced and self-dependent. Nor did it resemble the changeable light of most other men who are called great. There was in it nothing of the color-borrowing gloss of the chameleon, nor of the flickering play of the aurora borealis. It was moreover neither flashy, nor fitful,

nor brilliant, nor dazzling. It was mild, and steady, and pleasant in its brightness; and though it imbibed nothing, it emitted much, and gave to certain things around it a lustre not their own. In plainer terms, whatever Physick was, he was *of himself*. He was too rich in his own intrinsic resources to need any thing extrinsic, and too proud to receive it. For modest as he was in expression, and unassuming in deportment, no man had a deeper sense of independence, or was more thoroughly imbued with a spirit of depending on himself. A giver therefore in things professional, and not a receiver, he conferred on institutions to which he became attached a new splendor, and gave distinction and standing to men who attached themselves to him, without the slightest return. These truths the deceased must have felt within himself; because he could not conceal them from himself; a consciousness of its own existence being an attribute of greatness, as certainly as great muscular strength is known to its possessor. Hence all his official appointments came to him unsought-for—his election to the chair of surgery not excepted. That chair he did not sue for; nor would he ever have sued for it. It was erected for him, I repeat, because he deserved it; it was proffered to him, and he accepted it. And he was anxious to retire from it many years before he did so; and continued in it only at the earnest solicitation of his colleagues, and other friends of the institution, whose fame was so vitally entwined with his own.

True; his introduction into the Medical school presented Physick to his country, in a new and wider and richer field of action than he had previously occupied, and called on him to cultivate that field in a different style. But he was perfectly ready for the new scene, and its new duties. He brought with him all the resources and competencies which the station required. Mature in his preparations, and provided with the necessary and suitable means, not an implement had he to form, except on the score of invention and improvement an art to learn, nor an expedient to devise. The duties of the amphitheatre seemed at once almost as familiar and easy to him, as were those of the sick-room. He was therefore from

the first step in his academical career, self-possessed and self-sustained, instructive and efficient. And he added greatly to the standing and fame and attractiveness of the school. Accordingly, from the period of his accession to it, its annual classes increased with a rapidity, unknown to it before. Let me not however be unjust. The whole of this success belonged not to Physick. He was aided in the work by others, worthy of their places, and equal to their tasks. For a school composed of such men as Rush, and Wistar, and Barton, and Physick, and Chapman, the latter of whom, though their junior by many years, was every way fitted to take rank with his colleagues—for a school thus constituted not to flourish in any age, or any country, is impossible—unless causes should cease to produce their effects. Nor let me pass unremembered, and without the tribute of a bay-leaf to his brow, Dorsey,—Physick's near kinsman,—the young Marcellus of the band—who was summoned untimely from the theatre of action, in the morning of life, and the spring-time of his labors, his splendor in blossom, but the fruit not matured. Such was the brilliancy of his career's early promise, that had he lived throughout his day, to fulfil that promise, he would have been one of the medical ornaments of his country, and one of the luminaries of the age. It might even perhaps have been said of him, *professionally*, as it was of the elder Marcellus, *in arms:*

"*Aspice ut insignis spoliis Marcellus opimis*
"*Ingreditur, victorque viros supereminet omnes!*"

Physick was now in the academical chair, for which he was most pre-eminently fitted—the chair of surgery. And he ought to have remained there. But to prove that they *are* men, *all* men have their frailties. And, for once at least, Physick's discretion and judgment forsook him. He allowed himself to be transferred (for the act was not of his choice) from the chair of surgery, to that of anatomy—from the place where he was emphatically *at home*, to one in which he was *comparatively a stranger*. In this step his pre-eminence did not accompany him. Though unequalled as a surgeon; he had more than equals as an anatomist. He had many supe-

riors. He ought not therefore to have consented to his translation. It did not belong to his character and standing, to submit to inferiority, and invite defeat, by engaging in an enterprise, in which others could surpass him. The act was a descent from his "high estate," which dimmed and deadened his academic lustre. It was the fall of Milton from "Paradise Lost," to "Paradise Regained;" or of Homer, from the "Iliad" to the "Odyssey." But let us throw a veil over the indiscretion, and pass it by. However impressively his occupancy of the chair of anatomy marked at once the evening of his life, and that of his efficiency and fame as a lecturer; his superiority and renown in surgery experienced no evening. They were meridian still. Like the brightness of the tropical sun, their splendor was extinguished only by the departure of the orb from which it issued. But let me recall the expression. "Extinguished!" No; the splendor of Physick's surgery is not extinguished. The professional hemisphere of our country is still bright with its radiance; and even foreign lands throw back the effulgence. Among those who are sufficiently informed of his services, and qualified to judge of them, the reputation of the deceased is almost as high in Europe, as in America.

About four years ago, the decline of his health enfeebled him to such an extent, and so entirely disqualified him for public speaking, that he resigned his chair, and retired under the style of "*Emeritus Professor;*" the first or second instance, I believe, in which that honorary title has been awarded to any one in the United States. And it is rarely awarded any where; because the number of those who deserve it is small.

Such is the account I have been able to give you, of the career of Physick, as a practitioner and a teacher of surgery. Nor is any one so sensible of its defects as myself; because none who have listened to it, are so familiar as myself with the excellencies of its subject. I have yet to add, that he died on the 15th day of December 1837, in the seventieth year of his age. A few farther remarks of a more general character, and I shall close my discourse.

As a public lecturer, Physick's style and manner were altogether peculiar—altogether his own. He imitated no one—he attempted to imitate no one; and no one perhaps was able to imitate him. He was not *eloquent*, in the far too common acceptation of that term. He never indulged, I mean, in a tempest of sound, and a furious tussle with his own muscles and joints—in loud declamation, pomp of expression, mouthing pronunciation, broad grimace, or in violent pugilistic action and distortion of attitude—he never, in a word, ranted, roared, and raved, or in any way attempted to "out-Herod Herod," for the sake of effect. Such arts and efforts were as far beneath his standing, and as foreign from his taste, as they would have been inappropriate to the place he occupied, and the subject he taught.

In a different and more substantial sense of the word however he was eloquent. If to expound his subject with the clearness of a sunbeam—to be abundant in solid matter, and rich and pertinent in illustration and argument—to command the respect and observance of his class—to rivet their attention—to pour out to them a stream of instruction, which they were eager to imbibe to the last drop—to carry along with him their feelings, and mould them at pleasure—to make them grave, when he was grave, and light up their countenances with an approach to a smile, when his features relaxed—and to dismiss them brim-ful of the remembrance of his lecture, and anxious to retain it to the minutest portion—if this were eloquence (and I know not by what other name to call it) Physick I say *was* eloquent. But his was the eloquence of matter and substance; not of empty sound and show. It was the eloquence of science, and of the man; not the wordy harangue of the stump-declaimer, or the boisterous bawling of the Fourth-of-July sophomore, resolved to make amends by an abundance of words, for a paucity of ideas, and by force of voice and action, for feebleness of thought. Nor was it the eloquence of any one, except of him whose words are the representatives of his fulness of knowledge; and who forgets himself in the interest he takes in his subject and his audience.

The last lecture I heard from Physick, I shall never forget. The scene is at this moment before me, in form as picturesque, and colors as vivid, as it wore at the time. It was the concluding lecture of his course. And the year was that in which I took leave of him, to remove to the West, under a presentiment that I should hear him no more. His amphitheatre was crowded, and the class, by permission or custom, remained covered, and, in the depth of their attention, were rapt and motionless. They continued thus, until the Professor reached the valedictory portion of his address; when, in the twinkling of an eye, as if the crowd were instinct with the same life, the same principle of action, and the same spirit of courtesy and observance, every hat was off, every eye fixed on the speaker, and every head bowed toward him, with the cordial look, and in the respectful attitude of saying FAREWELL!

That Physick was pre-eminent as a surgeon, is acknowledged by every one. To call the matter in question, would be folly, presumption, affectation, or something worse. But his pre-eminence as a physician has been questioned by some—perhaps by numbers. Not however on grounds of the slightest validity. By none who knew him intimately, as a practitioner of medicine, and who are competent to judge, is a shadow of doubt entertained on the subject. I do not affirm that he was equally great in medicine and surgery. I do not, I mean, contend, that he surpassed his contemporaries in the former, as much as in the latter branch. But I do affirm, that he was pre-eminent in both. Surgery, extensively as he was engaged in it, constituted comparatively but a fragment of his business. The cases of sickness which he attended, in their numerical relation to those of a surgical character, were I doubt not in the proportion of more than twenty to one. Notwithstanding therefore his mighty services and fame in surgery, he was emphatically *the practitioner of medicine*—and one of the ablest and most successful I have ever known. He practised medicine, as American ships of war contend in battle—to subdue his enemy—to crush disease—not to make an empty and bootless show of

action. To each case he was employed in therefore, especially if it were severe and threatening, his attention was devoted, and *exclusive* during the time of his examination and prescription. He spent not a thought on any thing else; nor allowed an irrelevant idea to obtrude itself on his mind. Hence the clearness and truth of his decision, and the undividedness of judgment, under which he acted. And hence his success. For without such devotedness, mistakes must be numerous.

I have met him in consultation more frequently than any other physician, because I preferred him to any other; and I have received from him, in obscure and obstinate cases, more aid than from all others. As a consulting physiciun, he was superlatively conscientious, and never, like too many others, allowed his courtesy and deference to usurp the place of his sincerity and skill. If he found, in the treatment of the complaint, any thing which he considered erroneous and wrong, he frankly and firmly, but with perfect politeness, objected to it; and, on being requested to do so, suggested, in the same tone and manner, what he believed to be right. When in attendance on a dangerous case of disease, he never made a compromise in practice. Unless he could have carried into effect every thing he deemed essential to the safety of the patient, he retired from the consultation, and threw the responsibility on those whose practical views were different from his. And if the sick whom he attended alone deceived him in any way, or refused or neglected to comply with his advice, he promptly left them, with the remark, that if they could recover their health, in opposition to his directions, or in neglect of them, they could recover it without them.

Does any one, under the influence of common testimony, still entertain a doubt as to the greatness of the deceased, in either medicine or surgery? If so, let him contemplate the surpassing extent and weight of his character, and its continuance in full and even increasing flood, without a single hour of subsidence, for nearly fifty years, and his doubts must give way, before the united judgment of the nation. Respecting the standing, worth, and character of no public or

professional man, open to inspection, unprotected by party prejudice, and living in an enlightened and inquiring age and country, is universal and unvarying opinion ever groundless. No single occurrence of the sort can be adduced. He to whom greatness is unchangeably conceded, by every one, in every corner of the globe where he is known, *is great;* because on that point, the opinion of all cannot possibly be erroneous. As readily may it be in error respecting the course of the seasons, or the daily rising and setting of the sun.

It is well known that many persons have declared against the greatness of Washington; pronouncing him to be nothing more than a man of calm deliberation, good judgment, well matured experience and common sense, and great prudence. But that notion, opposed as it is by the decision of the world, is not worthy of a thought—much less of a reply. And did it need a reply, it has received it amply, in the publication of the "Writings of Washington," which have not only added eminently to the height and strength of his tower of greatness, but surmounted it with a glory of brighter effulgence.

Others again have contended and endeavored to prove, that even Napoleon, who, born and reared in comparative obscurity, became, by his mightiness the most illustrious sovereign of the age, the arbiter of Europe, and the wonder, if not the terror of the world—others I say have contended that even he was deficient in real greatness. But, by universal opinion, the notion is annihilated.

Of Physick the same is equally true. The mistaken and obliquitous fancy that would withhold from him the character of greatness, turns to nothing, before the same irresistible power. If he were not surpassingly great in medicine and surgery, wherefore was that attribute conceded to him, by the entire population of the United States? For that the concession was made is proved by the fact, that, from early in the present century, until a short time before his death, when his infirmities had entirely disqualified him for business, the sick and suffering resorted to him for relief, or consulted him by

letter to that effect, from every State and Territory of the Union. Such was the case with him to a much ampler extent, than with any other medical character that America has produced. And it testified sufficiently to his superior greatness. Should ever moreover a full and embodied record of all he did for the profession be made out, that work will bring his greatness into much bolder and brighter relief, as did the "Writings of Washington" with the greatness of their author. But, leaving to those who may still differ from me in opinion, (and such I know there are) to discuss the matter at issue in their own way, and to decide on it according to their own views of what constitutes greatness in the Healing Art, I must proceed to other topics.

To genuine experience in the practice of medicine, contrasted with what are called principle and theory, the deceased paid unusual deference, confiding in it more, than in any thing else. But he did not consider sound experience and extensive practice as synonymous forms of expression. In other words, he did not believe that the iustructive and useful experience of every practitioner is necessarily proportionate to the number of cases of disease he has attended, or the amount of time he has devoted to business. Nor did he consider the number of grey hairs possessed by a venerable member of the profession an unfailing badge of genuine experience. Far otherwise. In his opinion, one physician may derive a fuller and richer store of such experience from ten cases, than another does from a hundred; or from the practice of a single year, than another does from the practice of ten. And his opinion was correct. To the acquisition of experimental knowledge available in practice strict attention and severe scrutiny are essential. Without these, habits of common-place and routine may be attained; but nothing that deserves the name of experience; nor any thing calculated to supply its place. Genuine experience is tantamount to truth. It is the result of the knowledge of things as *they are*—not as we may *fancy them*—of things as the Deity, operating through the laws of nature, *has made them*—not as we may *mismake* them our ourselves. It necessarily implies there-

fore, careful observation, cautious circumspection, and deliberate reflection. Such were the sentiments of Physick on this subject; and such the mental habits which gave to him much of his standing and usefulness. That he was superior to other practitioners was not because his knowledge was in all cases more extensive than theirs. It was because it was better digested, more accurate and precise, and therefore more available in the treatment of disease. Many physicians far superior to him in what is denominated medical learning and attainment, were immeasurably his inferiors in medical skill, and practical therapeutics. He never performed a professional act, until (if the occasion permitted him) he had previously observed, reflected and judged. And hence his pre-eminent success in practice. To the kind of experience moreover here described, I repeat that his devotedness was peculiarly strong. In his professional capacity, that experience was his practical guide—the cynosure by which he directed his career. It is not to be understood however that he followed it empirically, and without the aid of other lights. He availed himself of all collateral auxiliaries. He conformed therefore to experience under the influence of well trained reason, and the decision of disciplined judgment. He of course called to his assistance all the resources of morbid anatomy, and of the best settled principles and rules of curative medicine. And with them his acquaintance was thorough and profound.

In the morals, courtesy, and etiquette of the profession, Physick was peculiarly correct and exemplary. In his conduct toward all regular physicians he was scrupulously just and honorable, holding even their slightest professional privileges inviolate. To junior physicians he was always indulgent and kind; and, during the last years of his life, he extended to such of them as became intimate with him, the counsels of a patriarch, and the beneficence of a father. But toward empirics, medlars, and intriguers in medicine, his hostility was inexorable. He held no intercourse with them, but avoided them as a pestilence, and repulsed them, if they approached him, as revolting incorporations of all that degrades

and debases humanity. And were all physicians of standing to do the same, medicine would be cleansed of much of the vice and corruption which disgrace it, and society protected from the practices of many, who now subsist on it by nefarious imposture, and destroy, with impunity, the comforts and lives of thousands of its members. For it is not to be questioned, that many physicians of rank and reputation encourage quackery, contribute to its perpetuation, and widen its sway, by consulting and holding intercourse with quacks and impostors. Of this fault (and it is a weighty one) a want of moral courage, a dread of giving offence, and a miserable hankering after popularity, are among the leading causes. For it is to be deeply lamented, that these mental defects and nuisances shed their blight on members of the medical, as well as on those of other vocations. Hence professional dishonesty is often triumphant. And cheats of every kind, instead of being repulsed, and compelled either to reform, pine and wither in solitude, or associate in an execrable pandemonium of their own, are not only tolerated, but received into what is denominated "*genteel society.*" Such, I say, was not the time-serving policy, and compromising practice, of him we commemorate. With vice and dishonor, meanness and trickery, of every description, he was resolutely, openly, and irreconcilably at war.

As a man and a citizen, the character of Physick is much less known, than as a physician and a surgeon. The reason is plain. He was not, as a man, ambitious of distinction, mingled comparatively but little in society, and took no prominent part in public affairs. His life was professional; much more exclusively so, than the life of any other distinguished physician our country has produced. Nor could the case be otherwise. His professional engagements were so numerous and pressing, as to exclude all others, that would have brought with them duties and obligations. Such responsibilities apart from those of his profession, he could not have discharged. His conscientiousness therefore forbade his contracting them.

With a limited circle of friends, however, he was intimate, and practised toward them no reserve. He mingled with

them socially, relaxed in their company from gravity to cheerfulness, conversed with them freely, and, under excitement, with animation and fluency, kindly and courteously and with a pleasing gracefulness welcomed them to his hospitalities, and, in the same style and temper, united with them in theirs. *They* therefore knew him as he was. And they esteemed him for his virtues, admired him for the elevation of his sentiments and the vigor of his thoughts, and held him in veneration for the purity and rectitude of his principles, and the dignity of his deportment. And I may safely add, that they loved him, for his many amiable and attractive qualities. In proof of the correctness of this last remark, the attachment of his friends to him was cordial and lasting. Nor does truth forbid my subjoining, that, even in the midst of the young and the mirthful, who visited in his family, his presence was often the delight of the circle. So flexible was his character; and so perfectly, when kindness and courtesy required it, could he adapt his manners to the company around him.

In consequence of the unusual settledness and immobility which on most occasions marked his countenance, a suspicion has been entertained by many, and a belief perhaps by some, that Physick was stoically cold and callous, and a stranger to sympathy with human suffering. Never was a mistake more gross and radical; nor an imputation more groundless and unjust. Physick a stranger to feeling and sympathy! Much nearer truth would it be to say, that an excess of feeling was among the evils and torments of his life; and one of the causes of his valetudinary condition. And in proof of the fallacy and injustice of the charge, no one was kinder, tenderer, or more consolatory in his deportment toward the sick. He knew the value of mental, as well as of material remedies. And he habitually administered them. Hence in the sick-room his manner was always adapted to the occasion—grave or cheerful, silent or otherwise; as circumstances required. And when the case called for it, his remarks were sprightly, and pleasant, and exhilarating. As his feelings prompted, and his well tried skill and judgment directed, he

adapted his manners to the work he had to perform. By selecting his subject and time, he could even *talk away* disease; or extract at least a portion of the poison from its sting, and give to misery temporary relief. Such is the efficacy of mental medicine, when skilfully administered. And in that administration, on suitable occasions, he often exhibited the happiest tact. Hence the boundless gratitude, admiration, and attachment, which his patients entertained toward him. With but few if any exceptions, every new patient lengthened the catalogue of his admirers and friends.

True; he could command his feelings, bid them be still, and compel their submission, when the crisis required it. And I need hardly add, that, in his professional career, such crises were of frequent occurrence. In the performance of great and hazardous surgical operations, it was vital to his success, that his feelings should be under control; and his intellect and resolution, his countenance and hand be as steady as fate. And they were so. His ability moreover to make them so, was one of the essential elements of his greatness. They were but soldiery for the time, in the conflict he was engaged in, and he the commander. And had either of them rebelled, faltered, or given ground, the result would have been disastrous, and probably fatal. But he held them unflinchingly to their post and their duty. And his triumph was secure. But let us reverse the tablet, and mark the contrast. He avoided, as far as possible, being a spectator of operations performed by other surgeons—unless his assistance was necessary. Why? Because the sight almost agonized him. To witness human suffering, unengaged in an effort to relieve it, was more than he could bear without peculiar distress. From the spectacle therefore, he instinctively turned away, or deliberately withheld himself. It was from the pain it gave him to be a spectator of pain, that he never beheld an execution on the gibbet. So unfounded, and I might add, so ungenerous is the notion which many entertain, that the practice of medicine, but more especially of operative surgery, renders the practitioner and the operator callous.

To those who have studied the natural relations of things as the subject deserves, I need hardly remark, that it was

Physick's character as a man, pure, and steady, and strong, and dignified, which conferred such elevation on his character, as a teacher and a practitioner of the Healing Art. Superior talent and knowledge alone would have been incompetent to the effect. It was his character as a man which qualified him to present to his fellow practitioners and teachers an example so instructive and commanding, and so worthy of their imitation—yet so difficult to be imitated.

Qualities so staunch and lofty, and at the same time so rare, raised him above the feuds, and animosities, and jealousies of the Profession. And so far above them was the sphere he dwelt in, that not only was he unannoyed by them; it was but by rumor, accident, or special information, that he became apprized of their existence. Virtually he left them beneath him, as the eagle does the storm, to enjoy the calm and sunshine of the upper sky.

It was for this reason that he was never a partisan in any of the professional squabbles of the day. He was too high for envy and its concomitants; because he was beyond the aim of competition. The very show of an attempt to rival him would have brought down on the vainglorious aspirant the blight of ridicule. He would have been likened to a dwarf defying a Hercules; or a jackal a lion. Of no other distinguished physician whom America has produced could the same be asserted, without a departure from truth. Of all such, as far as is now recollected, Physick alone was never a combatant in the wars of the profession; nor aimed at by the missiles of envy or jealousy. For the latter of these immunities I say he was indebted to his standing; whose loftiness was above even the hopes of aspiration and intrigue. His acknowledged neutral condition therefore, his well known resolution not to take sides in angry collisions, and the confidence reposed in his integrity and judgment, enabled him to act toward his professional brethren, when embroiled with one another, in the capacity of an unsuspected peacemaker and father. And when appealed to for such services, he never withheld them; but engaged in the peace-office with the candor and calmness that should characterze the umpire,

and rarely failed to adjust the difficulty to the satisfaction of the parties.

I have said that Physick's proverbial love of truth, and his freedom from all suspicion of insincerity, gave him great influence, and extensive usefulness. And his whole moral character, which was unsullied and unbending, co-operated abundantly to the same effect. Equally uncompromising moreover, as already intimated, was his personal independence. His decision once formed, and his ground once taken were never relinquished, unless he were thorougaly convinced of their incorrectness. And he surrendered them then without scruple or pause. Apart from his dislike of error and mistake, and his hostility to every form of management and intrigue, he felt that his standing needed neither of them to sustain it. On the contrary, he well knew that props to character so unsound and perishable, contribute to its fall, and often crush it under their ruin; and that to acknowledge an inadvertency or a fault when committed and discovered, comports no less with wisdom and discretion, than with uprightness and honor; because it averts more effectually than any other course, its pernicious consequences. To say that his firmness and decision of character were elements of his greatness, might seem superfluous. They are elements of greatness in every calling. In medicine and surgery they are as indispensable as in war. Vacillation and demur are as fatal to greatness and success in a physician or a surgeon, as in the commander of an army. To say nothing of their being an indication of moral weakness, they are too often the product of a clouded intellect. Other things being alike, the man who is most clear and discriminating in his vision and judgment, is most prompt and decisive in his enterprise and action.

Thus have I endeavored to sketch to you some what of the character of the deceased, in his various capacities, public and private, professional, social, intellectual, and moral. The picture however is irregular and incomplete. The principal elements I trust are there; but, from sundry causes, their arrangement is defective, and the product therefore wanting in

symmetry and form. I have found leisure only to gather up and lay before you, in a figureless mass, some of the leading attributes of him we commemorate; which, in their collective influence, ennobled his nature, and made him what he was. Embody them for yourselves, in a mental image, as they were actually embodied in him, and the experiment will convince you, that they constituted a man of morals so untainted and principles so correct, resolution so firm, and a spirit so independent, (could such an one exist) that, in the words of the dramatist, it might be said of him without a figure;

> "This was the noblest Roman of them all."—
> "He would not flatter Neptune for his trident,
> "Nor Jove for his power to thunder with;"

and that,

> "———Take him for all in all,
> We scarce shall look upon his like again."

Greece had one Hippocrates—Rome, one Galen—France, one Bichat—and England, one Sydenham in medicine, and one Hunter in surgery—no more. America in like manner has had one Physick. And though I may not say she will never have another; I do say, that such a boon is not among the "coming events, that throw at present their shadows before."

Here it was my intention to close my discourse. And probably I ought to do so. Under your indulgence, however, I shall add a few thoughts more; which, though they involve considerations relating too much perhaps to myself, will not, I trust, be deemed altogether irrelevant to the exercises of the evening.

I have lived to be the witness of much mortality among the distinguished characters of our land. Death has gathered in a heavy harvest of individuals of worth and eminence, whom I once called my friends. This is *really* the seventh, and *virtually* the ninth or tenth occasion, on which I have officiated, as chief minister, in doing homage to the memories of the dead of this description, with whom I had been previously in some way connected—with most of them intimately.

Of my teachers in medicine, the grave is now the dwelling-place of the relics of the entire corps. Physick was the last

of them; and he was but indirectly my teacher. I attended his lectures, not as a pupil, but, by invitation, as a junior physician. Over my real preceptors, Shippen and Kuhn, Rush, Wistar, Barton, and Woodhouse, the solemn ceremonial of "dust to dust" was long since performed.

Of many other members of the profession, who, though most of them my seniors, were near enough my own age to be my associates and intimates, the same is true. They too are in the "narrow house." Of these I might name in particular, Dorsey, and Debutts, and Brown, and Davidge, and Hosack, who were my fellow-laborers in public instruction, though not all in the same school. Nor is it inadmissible in me, I trust, to call up the name of another distinguished personage not of the medical profession, with whom I was officially connected, and on terms of intimacy and friendship for many years, and whose character I commemorated, in a public discourse. My allusion is to Holley, one of the most eloquent and fascinating orators of our country, and, for brilliancy of mind, manly qualities, personal accomplishments, and social attractiveness, scarcely perhaps surpassed in any country.

Of the entire number of those who have been public teachers, with whom I associated in early life, but three remain; Chapman, Coxe, and Dewees—the latter but the wreck and relic of what he was. And Jackson of Boston has more than died, in the death of his son, who was one of the most high-gifted and promising youths, that America, or any other country, has produced. These individuals moreover who were once my companions, and still survive to themselves and those around them, are virtually dead to me. We rarely meet; and when we do, the interview is transient. They are in a far distant region, in the midst of a remnant of their early associates; and I am here, comparatively alone in the desert of time, dissevered by space and mortality, from every friend and companion of my youth.

But on this retrospect so thickly studded with the trophies of death, I must dwell no longer. So far as it may be calculated to call up depressing recollections of the past, or to disspirit and

unnerve by a prospect of the future, I dismiss it from my thoughts. I shall practically retain it in mind only so far, as it may tend to confirm in me manly and virtuous resolutions, by a lively remembrance of the exemplary virtues and achievements of those, with whom I have been associated.

What if the retrospection does admonish me, in the words of the son of Fingal, that "the time of my fading is nigh, and the blast that shall scatter my leaves?" and that "when the stranger shortly comes; when he that has heard of me comes, he shall inquire for me, and not find me?" What I say of this? The premonition must neither unman me in feeling, nor unfit me for duty. Far otherwise.

If the retrospect warns me that my time of action is to be short; it but urges me by this to a higher and more determined energy of action while it lasts, for the more speedy accomplishment of my unfinished work. And, as far as my powers and resources may avail, the injunction shall be obeyed. Practically regardless therefore of the past, except to derive from it determination and example, my eye shall be on the future; and my course shall be onward.

There is one work for whose completion, before the failure of my strength, and the close of my labors, my solicitude is inextinguishable. It is the successful establishment of that institution, under whose auspices I have this evening addressed you. And come sickness or health, sorrow or gladness, good report or bad, prosperity or adversity—come whatever cast of the die the wheel of events may hold in reserve for me, unless some unforeseen disaster forbid it, to that end shall my resolution cling, and my powers of action be faithfully devoted.

ART. VII. *A Case of Fracture of the Thigh Bone.* By THOMAS L. CALDWELL, M. D., &c.

In offering to you the following case for publication, we have been influenced more by the opinions of others, our seniors in the profession of medicine, than by any feelings of our own. Limited as has been our experience, it is not for us to say what merit the treatment pursued possesses. The indications were plain, and if there was more simplicity in the means used to fulfil them than in those directed by most of the standard works on surgery; and the fulfilment of them, has, at the same time been complete, it may serve to convince the young surgeon that success is not necessarily insured in the treatment of injuries, by complexity of apparatus alone.

CASE. McG., a young man about 18 or 19 years of age, was admitted into the Louisville Marine Hospital on the forenoon of September 10th, 1837, with a compound fracture of the left thigh. He had committed a misdemeanor the preceding night, for which the police officers were in active pursuit of him. Finding himself too closely pressed, he sprang into a pit which had been dug for a cistern, about 12 or 14 feet in depth, and landing probably on an uneven surface, fell violently and the accident above mentioned was the result. Being taken out of the pit, he was left lying on the side walk till daylight, when he was conveyed to prison, remained there some hours, and was then brought out on a dray, to the Hospital. By this time, considerable reaction had taken place, he was suffering severely; the limb was considerably curved at the point of fracture, and the surrounding soft parts much swollen. The external wound was about one inch in length, on the outer side, and about the commencement of the upper third of the limb, say about four or five inches below the trochanter major; and had been made by the lower end of the superior fragment of the os femoris, which had torn its way through the mass of muscular fibre, forming the vastus ex-

ternus. The fracture of the os femoris was oblique, running upward and inward in the direction of the trochanter minor. The patient was of about the middle height, well set and muscular, and had, it was understood, been irregular in his habits, but not to such a degree as to have impaired his constitution. There did not appear to have been any hemorrhage of consequence from the wound. Dressings were immediately applied in the following manner.

The limb having been carefully washed with warm water, a common roller bandage of seven or eight yards long was applied firmly from the toes to just above the patella. Extension pullies were then applied above the knee, a counter extending band being arranged across the groin as if for reducing a superior posterior dislocation of the head of the femur. As the patient was of pretty full habit, and considerable resistance might reasonably be looked for in the contraction of the muscles which displaced the ends of the bone and occasioned the outward curvature of the limb, he was placed in a sitting posture, and a vein in the arm freely opened. Becoming sick and faint by the time he had lost twenty-four or six ounces of blood, he was instantly laid down and the action of extension and counter-extension commenced gradually and steadily. The limb was without difficulty, in a very short time brought to its proper length and form, and as accurately as could be judged the fractured ends were in apposition. Keeping now the extension at this point, another roller bandage was continued pretty firmly from the extending point to the groin, over the left hip obliquely, and one or two turns taken round the body to keep it from slipping. The external wound was merely covered with a piece of dry lint beneath the bandage. The pullies were now removed, and the space above the knee, which had of necessity been occupied by the extending bands was covered by a short roller, the whole limb being thus completely enveloped. The bed or mattress on which the patient lay during the dressings, was the one he was to occupy, being prepared as a common fracture bed, so that the natural evacuations could be performed without any need of moving. The limb was now placed on

a roughly made double inclined plane, lowered however so as to make the angle very obtuse, the bandage not permitting much flexion at the knee. During the whole operation he suffered but little pain, and at the end of it expressed himself perfectly easy. During the night he had a free healthy evacuation from the bowels without the aid of medicine, suffered no pain and rested well.

September 11th. Condition remained the same till evening, when his pulse gave evidence of considerable excitement, having since noon become too full, strong and frequent. His bowels not having been open to-day, there was exhibited:—

℞. Calomel gr. xv.,

Pulv. Ipecac, gr. jss.—Between eight and nine o'clock an antimonial solution was also directed, of the following strength, a tablespoonful every hour till the reaction subsided:

℞. Antim. tart. gr. jii.,

Aqua font. ℥ vi.

12th. Medicine had acted favorably during the night—skin moist and pleasant, and pulse reduced considerably, though still above the natural standard. The antimonial solution was continued *pro re nata.*

13th. Patient had passed a tranquil night; no pain in limb, tongue moist but rather too red, bowels not open, a slight cough. In the evening again was not quite so well—the pulse too frequent and tense, cough increased, tongue too red, some pain in abdomen—bowels not open since the night of the 12th. To relieve the symptoms was exhibited:—

℞. Calomel gr. xii.,

Pulv. Ipecac, gr. j., and the antimonial solution again renewed.

14th. Medicine had not operated—but the cough was relieved as well as the pain in abdomen, and the pulse improved—to aid the action of the medicine given last night:

℞. Sulph. magnesia, ℥ i.,

Aqua font. oj.—a wineglassful to be given every hour till free evacuation had been obtained. The day was passed however without his bowels being moved, but in the evening

the unpleasant symptoms had subsided entirely, the pulse being soft and natural and beating eighty-two to the minute.

15th. Had passed a very good night, having had one copious dejection and every thing appeared favorable—but in the evening was attacked with diarrhœa, having eight dejections thin, though bilious, in the course of a very few hours. Pulse also quick and too frequent. To arrest this at the time:—

℞. Tinct. opii. gutt. xxx., were at once given with the desired effect.

16th. Was doing well, had passed a tranquil night after the diarrhœa was checked, tongue slightly furred—pulse tranquil and natural.

17th. Passed a very good night, and appeared quite well—had no pain whatever. The dressings were removed to-day for the first time. We have omitted to state that for the first two or three days, the bandage around the thigh was frequently moistened with tepid water, or spirit and water, to aid in keeping down any inflammation.

On taking off the dressings there was not the least appearance of swelling or inflammation, the form of the limb was natural, and without the least shortening, the action of the muscles having been completely and as effectually controlled by the bandage alone, as could have been done by the most complicated fracture apparatus for keeping up extension. Added to this, the wound through the vastus externus was closed by the first intention, and only a small circular spot about the size of a six and a fourth cent piece which was not covered by the skin, shewed where the bone had protruded. A close examination by myself and several other medical gentlemen was made, to ascertain if any sinus existed, or any discharge from the interior could be discovered on firm pressure around the wound—such was not the case, and the injury might now fairly be considered as reduced to a simple fracture. The dressings were renewed as before, gentle steady extension by hand being kept up during their application, to prevent any displacement of the injured parts. The double inclined plane even when lowered to the most obtuse angle, being

found unnecessary from the steadiness with which the bandage maintained a proper situation of the parts, it was thrown aside and the limb merely laid lightly in a common fracture apparatus, the foot supported in such a manner as to prevent any torsion of the limb by its natural inclination to point the toes outward.

From this time to the 3rd of October there was not a single unfavorable symptom, nor did the patient require medicine of any description. All the natural functions were in perfect order, no pain was felt in the injured limb, his sleep was composed and easy, and the only drawback to a state of robust health was his inability to walk about. I had, after the second dressing adopted the following means of supporting the bandage over the part injured, to prevent the possibility of deranging the fracture, by such movements as the patient might involuntarily make while asleep.

Taking a pattern of the sound limb with paper in two pieces, and reversing it, I cut from a sheet of the stoutest bookbinders' boards which I could procure, two corresponding pieces with the exception of their being a little narrower. These were long enough to extend from about three inches below the patella, the inner one to the perineum, the outer to within about one and a half inches of the trochanter major. Their edges met posteriorly, but in front from one half to three fourths of an inch was allowed and a semi-circular notch to receive the patella was left in each, to prevent unnecessary pressure on it. These pieces rendered perfectly soft and pliable by soaking in hot water, were then applied to the thigh over the bandage, and were closely adapted to it by the very firm application of another roller. Soon becoming dry they formed a hard casing; gave the best possible protection to the injured limb.

On the 3rd of October the limb was dressed for the fourth time, and every thing seemed to be going on well, when in the night he was a second time attacked with a severe diarrhœa, which continued till the morning visit, about nine o'clock. The limb was perfectly easy. To arrest the attack on the bowels I ordered at once:—

℞. Calomel ℈ j.,
Pulv. Ipecac. comp. gr. v.

This had the desired effect and every thing again went on well. Union was ascertained to be gradually taking place between the ends of the bone, but the obliquity of the fracture was such as to render the process slow. About the end of October the patient received permission to rise and move about a little with the aid of crutches, but with positive orders never to take the sitting posture, which would endanger the curving of the limb by the fractured part resting on the edge of the chair. A close examination of the limb when the patient was lying down shewed no shortening, and when standing erect both feet equally pressed the floor. From the first week in November my own care of the patient ceased; he received one slight backset, from the boards being prematurely removed and his trying some experiments with the limb. The entire dressing was renewed as before, and with the exception of another attack of diarrhœa, when it had from some cause become epidemic in the ward, he went on uninterruptedly to a perfect cure. Some little stiffness of the knee joint arose from the long confinement of the limb with the bandage and splints of pasteboard; but this was rapidly wearing off when he eloped from the Hospital in January. Owing to a fear probably of again being arrested by the civil authority, he had, as has been learnt from the other patients, concealed from the attending surgeon and the resident physicians, as well as from the nurse, how well the limb really was, in order that he might the more certainly escape. On the 16th of December it had been ascertained by close examination, that complete bony union of the fracture had taken place.

One feature in the case struck us particularly. It was, the total absence of pain throughout the whole treatment. Our experience in surgery has not been very long, and from an accident of so grave a character we had anticipated a good deal of suffering, at least for a few days. But the patient did not lose one hour's rest from it, and his uniform reply to our frequent queries was, that the limb felt perfectly easy. Indeed, but for the fact of the healthy condition of all the

important functions of the system we should have apprehended, from the entire absence of pain in the part injured, that there was hardly a sufficiency of action in it to favor the process of complete reunion. We are prepared to hear the objection made to our treatment, that we relied too exclusively on the bandage, for keeping under control the powerful muscles of the injured limb. To this we would reply, that we were satisfied alike from what we had been taught, and from some striking instances in the practice of others that had come under our notice, of the entire efficiency of the bandage when properly applied by a practised and skilful hand, to answer this end. And to the result of the present case, we are willing to appeal for evidence of the soundness and safety of our belief.

REVIEWS.

ART. VIII. *A Treatise on the formation, constituents and extraction of the Urinary Calculus; being the Essay for which the Jacksonian Prize for the year* 1833 *was awarded by the Royal College of Surgeons in London.* By JOHN GREEN CROSSE, *Surgeon to the Norfolk and Norwich Hospital, and Lecturer on Clinical Surgery, Memb. of the Royal Coll. Surg. &c. &c. &c.* London, 1835.

The author of this interesting work remarks, in his preface, that "at the moment of commencing the task, he resolved to adhere to his own experience and a statement of facts, with observations founded upon them, avoiding references and quotations, conceiving that such a plan alone was suited to a Prize-Essay on a practical subject." And it is to his adherence to this sound principle that his treatise is indebted for its peculiar interest. The cases which he has introduced are original, and in reading his essay one feels that he is engaged with a work of original and independent thought. It is not burdened by a load of learning which it is much easier, with the books of reference in which our age abounds, for the author to compile than for the reader to digest. Derived thus, from his own personal experience and observation, it is a valuable addition to the stock of our knowledge concerning a most formidable malady of great, if not increasing, frequency in our country. We have therefore determined to devote some space of the first number of our Journal to an analysis of Mr. Crosse's work.

Few subjects in medical science, the author truly observes, are involved in greater obscurity than the formation of Urinary Calculi; at the same time it is one which excites the liveliest interest in the minds of medical men, in a region, more especially, where the disease is of such common occurrence as in the Western States. Perhaps no country of the same population affords a greater number of cases of stone, than the States lying in what is called the valley of the Mississippi. The fact should lead to a careful investigation of the cause. On this subject, which occupies the first chapter, Mr. Crosse has the following just observations:

"It is placed beyond doubt, that the great and prevailing source of urinary deposits in the human body is *dyspepsia*, arising generally from the food being taken in too large quantity, or its being not sufficiently digestible, leading to the generation of acid in the stomach, and of a superabundance of a peculiar animal substance, the lithic acid, in the urine. Where digestion is perfectly performed, there can be little fear of the formidable malady about to be treated of arising, the rest of the system being healthy. The errors into which pathologists have fallen seem to me attributable to their looking for one cause only of this disease, which generally requires the concurrence of several for its production. It is true that dyspepsia is continually happening, without producing urinary concretions; but it invariably creates some derangement in the excretion of the urine, disposing to their formation: and where dyspepsia is united with other exciting causes, as want of exercise, variable climate, peculiar diathesis, or local disease in some part of the urinary organs, calculous concretions are most liable to arise. The food and drink taken have sometimes a direct influence in producing urinary concretions, independent of dyspepsia, as is found to be the case with spirituous liquids or acids, which quickly determine the appearance of crystallized particles of lithic acid in the urine; and alkalies act in the same way, creating alkaline deposits." p. p. 1–2

It has generally been stated that calculous affections are of rare occurrence in warm countries; but Mr. Crosse is disposed to question the accuracy of the statement.

We are not sure that there is any thing in the history of such affections in the valley of the Mississippi opposed to this generally received opinion. Our latitude is a southern one,

and our summers long and ardent; but our climate is eminently variable, and in every respect of the character most favorable to the production of such disorders. Even in the most southern States the vicissitudes of temperature are sudden and great, and the absence of the extreme cold is compensated by the humidity of the atmosphere which is peculiarly powerful in checking the action of the skin.

So far as dyspepsia is a cause of stone in the bladder, we can be at no loss to account for the number of cases in the region alluded to, for in no country, we are persuaded, does this complaint prevail more extensively. But dyspepsia is a very prevalent complaint in Boston also, and in the northern States generally, while calculus is of comparatively rare occurrence. That the two diseases often, perhaps most generally, exist in the same individual cannot be doubted; but that other causes than disturbance of the digestive function are necessary to develope the urinary concretion we think is fully established by the facts alluded to.

The author has the following additional remarks on the same subject:

"In the county of Norfolk, where undoubtedly calculous disorders are very prevalent, perhaps even more so than any other district of the United Kingdom, neither the food, soil, nor beverage, so far as I have been able to ascertain, have any particular share in determining such a result. Minute observations upon the climate might better explain the matter; the great prevalence of a north-east wind, and the frequent, sudden, and very considerable changes of temperature, acting upon persons already affected with the most prevailing disorders of the district, dyspepsia scrofula, or rheumatism, cannot but be regarded as most powerful agents in giving rise to such frequent cases of gravel and stone. I have repeatedly known persons, who were free from gravelly complaints whilst residing in the metropolis, affected by them on spending a few weeks in the country referred to, and relieved, or entirely freed from them on a change of residence, although in each situation they followed carefully the same diet. Can we disregard climate, and the peculiar state of the atmosphere, in our attempts to explain such effects?" p. 3.

Whatever interrupts the free evacuation of the urine becomes a disposing cause to calculous deposits; and hence

stricture of the urethra, one of the most common and powerful interruptions, as it not only detains the urine in the bladder, but eventually produces morbid action in the lining membrane of that cavity, and a catarrhal secretion from its surface, may be stated as the most frequent of the disposing causes. It is plain that a stricture acts also in causing stone, by detaining in the urethra or bladder, such small calculi as in the healthy state of the canal would pass away. The author concludes his first chapter on the causes of stone by remarking, that

"Sedentary habits rank amongst the circumstances disposing to urinary concretions, by favoring indigestion, gout, and enlargement of the prostate gland:—and when dyspepsia is present, all the causes enumerated act with greater force, and the result is produced with most certainty, by two or more causes combining together."

In the second chapter, the author treats of the chemical composition of urinary calculi, a subject which has been peculiarly enriched by the labors of modern chemists, particularly by Dr. Yelloly and Dr. Prout, insomuch, indeed, that the discovery of new compounds is scarcely to be expected. The subject is important, since upon our knowledge of the chemical constitution of calculi depends our ability to correct the diathesis, and prevent the urinary concretion. The analysis of any part of a calculus is useful; but it is the nucleus, the author observes, which is calculated to excite most interest, because its analysis bears so directly upon the prevention of the disease. Of one hundred calculi passed by the male *per urethram*, which, if retained, would probably have become the nuclei of larger concretions, Mr. Crosse found on analysis, that seventy-two were composed of lithic acid, or lithate of ammonia, nine of lithic acid and oxalate of lime, fourteen of oxalate of lime, and but one contained carbonate of lime. The following process for the analysis of the oxalate of lime—a formidable species of the disease since we are ignorant of the means of preventing it—is so simple and easily performed, that we transcribe it for the benefit of such of our readers as may have an opportunity of practising it.

"A particle of this concretion, being submitted to the flame of a spirit-lamp, urged by the common blow-pipe, a drop of dilute nitric acid is applied to the residue, and immediately globules of air are extricated, and can be seen rising through the fluid, with a magnifying glass, or even with the naked eye; these globules of air are carbonic acid gas, the heat applied having been just sufficient to decompose the oxalic acid, and out of its elements carbonic acid gas was formed, which united with the lime." p. 8.

The third chapter treats of the mechanical composition and growth of vesical urinary calculi, and embraces some curious and valuable facts. Calculi of a pliable nature are sometimes broken in the bladder, from violence done in sounding, or even, where there are several, by knocking against each other, of which instances are cited by the author. Patients have heard calculi knock against each other in the bladder.

On the growth of the stone the following remarks are important:

"When a calculus is once formed in the urinary bladder, and has attained too great a size to pass away by the urethra, it is correct to state, that it will generally go on increasing in size, so long as the patient lives to be tortured by its presence. It cannot however be denied, that if the patient maintain good health, the urine be kept in a normal state, and the coats of the bladder or of other parts of the urinary passages do not take on diseased action, the stone may remain for a time stationary as to size; this is a point so doubtful and difficult, that many examples must be collected before it can be settled. I have met with only one, in the case of a patient who, twenty years before his death, was assured by his surgeon, after sounding, that he had a stone; he refused the operation, and at the end of that number of years died, and the stone found in his bladder weighed only six drachms and one scruple, and was composed of almost pure lithic acid." p. 11.

Calculi composed of lithic acid or oxalate of lime are of slowest growth, and accompanied by the least degree of disease in the lining membrane of the bladder, while those composed of the phosphates increase most rapidly, and are the worst form of the disease.

In chapter fourth, calculi in the kidneys and ureters, and their pathological effects are discussed. The author believes, from much observation, that gravel in the tubuli uriniferi of the kidney is a pathological state which rarely exists. It is in the pelvic cavity of that organ that renal calculi are most commonly formed, and are met with on dissection. They occasionally excite inflammation of the kidney and of the lining membrane of the pelvis, and lead finally to the absorption of the parenchymatous substance of that viscus. This does not necessarily occasion a suppression of urine, a very thin layer of the glandular substance being sufficient for that purpose.

"One ureter may be completely obstructed, and the function of the kidney connected with it destroyed, without danger to the patient, or other inconvenience than pain; but if the other ureter become obstructed in like manner, the patient inevitably dies in six or seven days; I have met with instances confirming this, where I had convinced myself by the symptoms that one ureter was permanently obstructed and one kidney only left to secrete urine." p. 20.

"The evils produced by renal calculi," the author continues, "are not to be measured by their size; a small passable calculus, in its course along the ureter, causes most severe and acute symptoms, which every practitioner is familiar with; a calculus firmly impacted in and filling the ureter, sometimes gives little pain, although leading to complete destruction of the renal organ; whilst a large calculus occupying the pelvis, and allowing the urine, as it is secreted, to pass on towards the bladder, with much pain brings no immediate danger, and may remain for many years, increasing sometimes to so great a size that the parenchyma is absorbed to make room for it; and when the calculus is not very large, by keeping up irritation and an increased flow of arterial blood to the organ, it often leads to an augmentation of its glandular substance. A considerable calculus in the pelvis brings less danger of obstruction to the passage of urine, than of acute inflammation, which arising in one kidney, often affects both and creates fatal suppression of the urinary excretion; in the absence of acute inflammation, a calculus in the pelvis, creates a dull heavy pain in the loins, extending sometimes to the scapula, at others over the buttocks or to the groins and scrotum, and along the thighs: bloody urine

after exercise; dysury and frequent micturition as if there were a stone in the bladder; and by chronic inflammation of the membrane lining the cavities of the kidney, an abundant catarrhal or muco-purulent secretion is formed, which appears with the evacuated urine.

In general one kidney is principally affected, the other being nearly or quite healthy; and we often find that when the urine is clear the patient has most pain, and expresses himself to feel easy when there is a plentiful mucous secretion with the urine, in the former case, the ureter of the affected kidney is temporarily obstructed and clear urine from the other organ, which is healthy, alone reaches the bladder. This state of ease when the urine is turbid, and increased pain when it flows clear, often attends disease of one kidney, unconnected with a calculus; but a marked succession of symptoms after the above order, always points out one kidney to be diseased and its ureter occasionally obstructed." p. p. 21–22.

The fifth chapter treats of urinary calculi situated in the urethra, and on calculous concretions in the prostate gland. He says:

"It has repeatedly happened that a calculus has just quitted the bladder and become fixed in the commencement of the urethra, increasing then in process of time to a considerable magnitude, so as to lodge partly in the prostatic portion of the urethra and partly in the bladder. A stone thus placed creates great pain, and is usually accompanied by constant stillicidium; it is easily felt with the sound, but this instrument meets with great obstruction when an attempt is made to introduce it into the bladder; indeed, if there have long been stillicidium, this viscus becomes so much contracted, that there is hardly a vesical cavity remaining to receive the end of the sound. The surgeon may recognize such a position of the stone not alone by the symptoms enumerated, but by the sound coming in contact with it before being passed deep enough to enter the bladder; and if the stone occupying the prostatic urethra be large, it can be felt by the finger introduced per anum. It is highly expedient that an operator should know when a stone occupies this peculiar situation, as he will meet with great embarrassment from proceeding, in such a case, under the idea that he is about to remove a loose stone from the cavity of the bladder. A very experienced lithotomist refused to operate upon a patient aged sixty-six years, on account of the bad state of his health, and the morbid condition of his bladder as indicated by the abundant

muco-purulent discharge voided with the urine; but without detecting or suspecting any peculiarity in the situation of the stone. After this advice was given, the patient lingered in great misery between two and three years. I obtained his bladder and found a large calculus occupying its neck and prostatic part of urethra, which were become one uniform cavity, the prostate gland being absorbed, and the fundus of the bladder contracted so as to present a cavity not bigger than a small nut-shell. The ureters and vasa deferentia opened into the cavity occupied by the stone, defining its situation to be as I have stated. Had an examination during life been made per anum, the stone would have been felt by the finger just within the sphincter, and might readily have been removed in that direction; but I do not advise such a proceeding, fearing a recto-urethral fistula will remain afterwards; I believe it is best to remove a calculus thus placed, by a lateral incision in the perineum, where a staff can be introduced into the bladder; or by cutting upon the gripe, where it cannot."—p. p. 26–27.

The author recommends the following treatment in such cases:

"When a calculus of considerable size is situated in the membranous part of the urethra, immediately behind the bulb, if the finger in ano can be carried beyond it, so as to press it forward in the perineum, it may be removed by a semilunar incision, as in cutting on the gripe; indeed if there be an insurmountable stricture anterior to the calculus, you can scarcely adopt any other operative proceeding. Calculi lodged in the urethra, even of larger size, are sometimes not discovered with the sound or catheter, which it seems difficult to explain, unless we suppose that the operator, thinking only of the bladder, neglects the slighter impressions conveyed by the stone in the urethra; it may however happen that the muscles about the urethra, embracing firmly the instrument, prevent its touching the calculus, which is generally lodged in a depression or cavity, formed by it and answering to its size.

Large calculi lodging in the membranous portion of the urethra sometimes work a spontaneous cure by finding an exit at the perineum, the soft parts ulcerating or sloughing, or abscesses forming so as to let the calculi into their cavities. A boy, aged seventeen, after suffering for above ten years from very painful symptoms, and having abscesses and fistulous openings in the perineum, got rid of a calculus in this direction weighing two ounces and a quarter and measuring

nearly four inches in length, it is now in my collection; the boy lived two years afterwards, voiding other smaller calculi by the wound, which never healed.

Sometimes calculi in the urethra, quitting the passage by ulceration or otherwise, and getting into the cellular tissue under the integuments, descend into the scrotum, and still maintaining a channel of communication with the urethra, so that the urine gets access to them, they increase to an immense size; I am acquainted with a case where a calculus weighing eight ounces was removed from the scrotum of a man thirty-six years of age, and which I conjecture to have been formed in the above manner. The removal of such concretions is a very easy and safe operation; they are probably always composed externally of the phosphates, and if the explanation I give be correct, the cavity in which the stone is lodged will be found to communicate by a fistulous channel with some part of the urethra." p. p. 31–32.

The pathological effects of stone in the bladder, which forms the subject of the sixth chapter, are familiar to the profession; but, as on all the phenomena connected with the disease, the author of this essay has been able to reflect some additional light on this from the stores of his personal observation. The following remarks, although not claiming to be new, are valuable as having been confirmed by his own experience in calculous disorders.

"A calculus, which may be regarded as a foreign body, can very rarely remain long in the urinary bladder, without creating irritation followed by difficulty and pain in the discharge of the urine; repeated attacks of inflammation of the lining membrane occur, and the muscular coat is called continually into powerful action, to overcome the resistance to the flow of urine and empty the organ of all its contents. The lining membrane of the bladder becomes very vascular, and is often abraded, giving rise to a flow of blood, which tinges the urine; a state of chronic inflammation is established, and a catarrhal condition, or an abundant secretion of mucus is set up and maintained; if the patient keep quiet and recumbent, this mucous secretion is diminished or removed, and the urine voided may be for a time unclouded, although the painful symptoms continue; but in an aggravated degree of this diseased action, and after its long continuance, the secretion is muco-purulent, and the bladder will not recover itself so long as the stone remains, in some instances not even when it is removed.

The straining and vesical tenesmus cause a great increase in the thickness of the muscular coats of the bladder; and frequently sacculi, or hernie of the lining membrane between the muscular fibres, are formed, which is indeed so common an effect, that such a condition is met with in a great proportion of those who have long labored under stone: such sacculi are usually small, but once formed, they may go on enlarging to a great size, and if numerous, may become capable of containing more urine than the proper cavity of the bladder. It is mostly in the adult and the aged, that sacculi of the inner membrane are met with; I have never seen them in the very young: their occurrence would be more frequent, were not the bladder to thicken in its muscular coat and remain contracted close to the calculus; it is where the bladder is not contracted, and its coats not much thickened, that we find large sacs of the inner membrane, which cannot form when the coats are thickened and the cavity small. Although sacculi are so frequent, large sacs are rarely found, and consequently a sacculated calculus in the bladder, formerly so often spoken of and now occasionally reported by an unsuccessful operaton to be present, may be considered a rare occurrence; it is however one of the complications of this disease, which the surgeon ought to bear in mind and have a clear notion of.

Considering the very morbid condition of the lining membrane of the bladder, where a stone has been long present, it is surprising that ulceration of that membrane should so seldom take place; a more frequent consequence is abscess in the thickened coats, and the matter may find an outlet into the cavity of the bladder or it may escape into the peritoneal cavity and prove destructive; or without the abscess bursting, fatal peritonitis may be induced. These abscesses in the thickened coats of the bladder slough or become gangrenous in extreme cases, and aged persons, who have for years been sufferers from stone, usually die from this cause. Many of these morbid conditions are referred to in the explanation of the plates; but there are others, not of less moment to be known, which cannot be so represented, such as the increased power and size of the muscles about the neck of the bladder, levator ani, transversales and ejaculator—the general fulness of the perineum—the varicose state of veins about the rectum and neck of the bladder—consequences of painful dysury and vesical tenesmus.

As so much has been said of sacculi of the bladder, I may add that stricture of the urethra may and often does cause them, and give rise to symptoms resembling stone, when

none is present. A gentleman had for many years severe stricture, which was at length completely and permanently cured; but painful, frequent micturition continued; he was repeatedly sounded for stone and had the opinion of many surgeons of eminence, without obtaining entire relief: the urine deposited much mucus; after suffering thus several years, he died, and dissection threw no other light upon the cause of the painful symptoms, than the numerous large sacs of the inner membrane. Although sacculi are a disposing cause to stone, none was produced in this case, the patient being very temperate and careful, studying in every way to relieve his pain and prevent an increase of disease. Thus the sacculi, produced by stricture, remained after the latter was cured, and ultimately caused the patient's death.

Stricture of the urethra is more often a cause than a consequence of stone in the bladder; but sometimes inflammation extends from this organ to the urethra and severe permanent stricture is produced at the membranous part; at other times a stricture from inflammation is suddenly produced."

The following highly interesting and curious case is given in chap. 7, on sounding for a stone in the bladder:

"Master C., was about a year and a half old, when I was first consulted about him, on account of frequent inclination to pass his water, attended by straining and painful efforts; he had been observed to be thus affected little more than a month, and was already shrunk by severe suffering. Medicine failing to relieve, I at length sounded the bladder, but could feel no stone. Alkalies, opiates and the warm bath were employed; he always rested a little better on the night the bath was taken; still his symptoms increased in severity, shrinking him rapidly. He was continually wet with urine, which was passed in drops, an effort being made at various intervals, from a few minutes to half an hour. Each attempt to void the urine was accompanied by violent straining and rubbing the end of the penis with the hand. The nights were passed in the same manner as the days, except that during the former, the little patient was said to scream and strain rather less violently; unless laudanum was given him, he never got any rest until the morning, when he would occasionally sleep hurriedly for an hour or two. At almost every fit of severe straining and voiding of urine, a little feces was passed, but the rectum never prolapsed. About every two or three weeks, I used the sound gently, and twice thought I felt a stone, but not satisfactorily; when I received this impression, it was always on passing the sound towards the left side of

the bladder. No bleeding ever followed the several soundings performed by me during three months, and the urine was generally voided a little better afterwards, sometimes as much as a tablespoonful at a time. On the twenty-eighth of December, I again used the sound, which was resisted by something unusual towards the left side of the bladder; for several days after this examination, the urine was tinged with blood. The patient had become greatly emaciated by this time, the skin hanging flabbily about him, and the countenance presenting as expressive a picture of suffering and grief, as ever I witnessed. Soon afterwards I called into consultation the most experienced surgeon on the spot, who was of opinion that he felt a stone; to me the evidence was not at all clear, and I could only state that I believed I sometimes felt a stone towards the left side of the bladder. Various ideas passed through my mind, in the course of these examinations. I thought a stone might be encysted at the termination of the left ureter, and it was thereabouts I always felt the resistance; I had frequently introduced the finger into the rectum, whilst sounding, without gaining any information, except that when the child screamed, and the muscular coats of the bladder contracted firmly upon its contents, it felt like a firm tense ball, shaped like, and about twice the size of, a walnut. I believed that I could feel a prominence, answering to the termination of each ureter in the bladder.

The little boy was evidently sinking under his painful disease, and when two years old, it was agreed that an operation should be attempted for his relief; it was accordingly performed on the tenth of January. I introduced the curved staff without difficulty; the anus prolapsed from the violent straining. The same experienced surgeon who had met me before in consultation, now gave his assistance, and stated again his opinion that he felt a stone; I could not do so, although I introduced the sound, as well as the staff; but I felt a resisting body at the left side of the bladder, about the termination of the left ureter. I hesitated about proceeding further; after a few minutes delay, however, I determined to cut into the bladder, and re-introduced the staff for this purpose. I observed there was a great fulness of the perineum; as soon as I cut down to the staff, and opened the membranous part of the urethra, a semi-transparent substance appeared in the wound, resembling the mucus which had been passed from the rectum by the child's straining when first placed upon the table, and I feared that I had, for the first time in my life, wounded the rectum! and the same impression, I afterwards learnt, momentarily pervaded the minds of

the numerous bystanders. This accident was not, however, sufficient to baffle me, nor to prevent my proceeding in the rest of the operation in which I was embarked. With the assistance of my left fore-finger, guided by the staff, I carried the scalpel forward fairly to the neck of the bladder, and on withdrawing the knife, I observed that the wound became instantly filled with a mass resembling, on this sudden view, what one would have expected to see, had I opened the peritoneum and allowed the processus vermiformis and several folds of the small intestines to protrude; such was the momentary, frightful impression, that held the mute attention of myself and all who were present; I pushed back the protruded parts, carrying my left little finger into the bladder, where I could feel no stone, but found the cavity filled with soft tumors, with a firmer substance near the orifice of the left ureter. If I betrayed any judgment in the case, it was undoubtedly in this stage of the business, by relinquishing the forceps held in readiness for me, and withdrawing my finger from the bladder. The same parts then protruded, as on the bladder being first opened, and they proved on inspection to be tumors, connected together like a cluster of grapes, some more some less transparent, resembling in firmness, appearance and structure, the mild polypus nasi; the membrane by which they were connected with each other and with the inner surface of the bladder, was long and loose enough to allow some of the tumors to hang externally dependant at the wound, and I have no doubt that, by the violent straining efforts of the child, when first placed on the table, they had entered the urethra; this is indeed proved to have happened, by the tumors appearing in the wound the instant I based the staff, and it accounts for the fulness of the perineum which I noticed immediately before commencing the operation.

The nature of these tumors being now understood, and no doubt left of their being mild polypous masses growing from the inner surface of the bladder, it became obvious that the only chance for the patient's recovery must be sought by removing them; I accordingly cut off with scissors all that were within sight. The violent straining efforts, which the child had kept up constantly during the operation, brought several more tumors, as big as grapes, down sufficiently low to admit of being cut off. Very little bleeding followed the excision of these tumors. Introducing now a fore-finger into the bladder, I ascertained that more of the diseased structure remained behind, than had been removed; and as many of the remaining tumors were attached to the bladder by a broad basis, it was deemed advisable to make no further attempts for their

removal. To have introduced the forceps, with the intention of tearing away these tumors, as is often done with a polypus nasi, would have inflicted irretrievable injury to the bladder; fortunately I endeavored to conduct the whole of these proceedings as gently as possible, that the operation might, even by the most prejudiced, be regarded as having little to do with the unfavorable result I anticipated.

Notwithstanding a powerful opiate was administered, the child continued to have violent fits of vesical tenesmus after the operation, and could scarcely be prevented from placing himself in his usual posture, resting upon his knees and elbows, to give full effect to these exertions. At the end of four hours, I placed him again on the table, to ascertain whether these efforts had caused any fresh tumors to protrude. The wound was plugged up with a coagulum, which I removed, exposing a tumor as big as a nut, and of a purple color from either bruise of it or constriction of its neck; this I easily brought lower down with my fingers, and with scissors cut through the narrow neck by which it was attached to the bladder.

I again introduced my fore-finger into the bladder, so as to examine the whole of its cavity; no more tumors descended on the finger being withdrawn. Much of the diseased structure remained, so extensively connected with the inner surface of the bladder, that I could not undertake to meddle with any part of it. Had I found tumors fixed by a narrow basis, I should not have hesitated to introduce curved scissors into the cavity of the bladder and cut them off, knowing that unless the bladder were emptied, the tenesmus would go on to the quick destruction of the patient—opium freely given, quieted, but did not prevent fits of straining from recurring every five or ten minutes; it was only by actual restraint that the child could be prevented from placing himself on his knees and elbows as he had been accustomed: still nothing more protruded through the wound, which looked well, and gave passage to an ample quantity of urine. The perpetual straining efforts wore out the feeble powers of the little patient in forty-four hours." p. p. 44–48.

Men of very great experience and renown have publicly operated, expecting to find a stone where there proved to be none; among others, this has been done by Cheselden and Desault. In his system of Surgery, Benj. Bell affirms that the former of these surgeons thrice lithotomized and found no stone. Baron Dupuytren cut a child two years and a half

old, and no stone was present. The same happened to Roux—and Mr. Crosse, who cites these cases, states that he has notes of not less than eight such cases, occurring to practitioners within his own sphere, and to several of which he was an eye-witness. The error was occasioned in each, by the existence of some morbid growth in the bladder, by a projecting sacrum, or by the uterus stopping the sound. In two, if not more instances, the author remarks, all the painful symptoms, stimulating those which a vesical calculus creates, were perfectly removed by the operation performed.

In chap. 8, directions are given for removing calculi through the urethra. The details would occupy too much space in our Journal, nor do they contain any thing which is not to be found in late writers on operative surgery.

The next chapter on breaking up the stone in the bladder treats of one of the most interesting topics which at present engage the attention of the surgeon. The author thus remarks on the brilliant improvement in this department of the healing art—the glory of modern surgery.

"The period is quite within the compass of my recollection, when the suggestion of an instrument, to be introduced into the urinary bladder, with the view of mechanically acting upon a calculus and effecting its removal piecemeal, was regarded as visionary, and the account of a case in which the patient effectually operated upon himself in this way, seemed too extraordinary to gain general belief. Great changes and improvements have since then happened, resulting from the ingenuity and perseverance of many surgeons; and several hundred patients, afflicted with stone, have indubitably received a permanent cure of their disease by the surgeon mechanically grinding it away. Perhaps in no instance, in the history of our art, has ingenious mechanism been so successfully applied to the relief or cure of human maladies, as in lithotrity, or the operation of grinding or filing away the stone; still the construction of the instruments for this operation is so complicated, and so much delicacy and tact are needed for their safe employment on the living subject, that they are scarcely employed by any, save those who dedicate their time and attention almost exclusively to the undertaking." p. 65.

That the operation of lithotrity requires skill in the performance, is certainly not to be urged as an objection against

it. It has been successfully performed—that is enough. It has been repeatedly executed by a surgeon of Philadelphia, and by others in other parts of the country. On suitable subjects, the operation is not only practicable, but unattended by danger and almost by pain. It is the duty of men pretending to be surgeons to qualify themselves for all the high functions of their profession, and gentlemen thus qualified will not cut for stone where it can be removed by another process.

From the chapter on the operation of lithotomy we make but a single extract, which contains advice which we deem judicious.

"No part of the operation of litho-cystotomy," he remarks, "requires to be done with more feeling and judgment than the extraction of the stone; the operator should do this gently, patiently and thoughtfully, guarding against the use of more force than the lining soft parts can be expected to bear without resenting the injury by subsequent inflammation, suppuration, or sloughing; without lacerating, he should dilate the wound, in order to bring the stone through it, pulling with the forceps from side to side, or downwards and upwards, according to the direction of the blades by a movement similar to delivering with the forceps in a case of midwifery. If the stone do not quit the bladder, and there be great resistance, the assistant receives the forceps, and, standing over the patient as in holding the staff, pulls them forwards, still grasping the stone, as if to extract it, whilst the operator, with a curved probe-ended bistoury, cuts the resisting parts close to the stone, in the direction of the original wound, obliquely downwards and outwards, until relief is given; sometimes I have known the resisting band felt upon the stone, on the side next to the symphysis pubis, and the cut made with bistoury in that direction, or upwards. I deem it much better to enlarge the wound by a second cutting, at this part of the operation, when the size of the stone and the resistance met with prove the necessity for it, than to cut too freely at first, making a large deep wound (which is always dangerous,) and securing a quick operation at the expense perhaps of security to the patient.

In recapitulating what belongs to this part of the operation, which I have attempted, however imperfectly, to describe, the best rules I can lay down are—to make the deep incision, through the prostate gland and neck of the bladder, of moderate extent, so that the forceps may readily enter—to dilate a

little with the finger and forceps, before grasping the stone—to act slowly in the extraction that the wound may still further dilate—and to enlarge the wound without hesitation, and to the requisite extent, if you find great resistance to the passage of the foreign body to be removed—thus, you will have the best chance of accomplishing a safe, though you may fail to have a rapid and brilliant operation. The quickest operations of litho-cystotomy, in my experience, have not usually proved the most successful. The dissecting-room rule, which all young operators are ready to put in practice, of cutting freely so as to effect a rapid operation and meet with little or no resistance to the extraction of the stone, is not sanctioned by the experienced and practical teacher. Gentleness and precision ought rather to be studied than great expedition. Le Cat cut about half a dozen patients in twice as many minutes, and, it is said, lost nearly all of them! At any rate, whether the operator cut much or little, let him not use the forceps boisterously, but temperately and with gentleness, for violence, if it do not produce immediate laceration of soft parts, will be sure to bring on subsequent inflammation, tumefaction and sloughing."

On the treatment required after the operation of lithotomy, the author has nothing which is not well understood by the profession in this country. It is doubtless owing to their judgment in preparing their patients for the operation, and in the subsequent treatment, that their success in it is so great—if, indeed, much of it is not to be ascribed to the soundness of constitution and pure air which the subjects of stone in the U. S. enjoy. The fact, we believe, is unquestionable, that American surgeons have surpassed all others in this operation. We have a personal knowledge that it has been performed by four young practitioners, from three to six times each, without the loss by any one of a single case. This is more remarkable than even a much larger number of successful cases, in the hands of an experienced operator; and it is detracting nothing from the skill of those gentlemen to attribute a portion of their good fortune—greater than most of the best surgeons of Europe can boast—to the original vigor of their patients' constitutions.

We find nothing in the last chapter, on "hemorrhage after litho-cystotomy" particularly worthy of comment, and shall

close our notice of this work with the last words of the author, which are to be commended for the spirit of candor which they breathe. He remarks:

"In summing up this essay, at the close of the last of its chapters, I need not, I trust, explain the motives which have led me to state, so honestly and freely, whatever of untoward circumstances have happened, either in my own actual practice, or in the proceedings of others under my observation. To boast of uniform success in any capital operation, is not the dignified course of a surgeon, any more than that the physician should quack of universal cases. Experience in lithotomy, like victory in battle, is seldom gained, without counting a certain number of slain." L. P. Y.

ART. IX. *Practical Observations in Midwifery, with a selection of Cases, Part 2nd.* By JOHN RAMSBOTHAM, M. D., *late Lecturer on Midwifery at the London Hospital, &c.* London. S. HIGHLY, Fleet street.

Notwithstanding the British age of this work, its many excellencies and extreme scarcity in our country, will plead in behalf of a review of its observations and principles. The high character of the author, his close observation, the nature of his facts, the accuracy of his reasoning, the rich and varied field of experience cultivated to the highest point of excellence, the cool and matured judgment impressed upon almost every page, and above all, his pre-eminent adherence to truth, combine to stamp a value on the book, so seldom met with, that it deserves to be appreciated fully when brought before us. Every chapter bears testimony to a calm and chaste philosophy which predominates constantly, over mere hypothesis, for the man is completely sunken in the medical philosopher. The work is a contribution to medical science, and is not intended to garnish the name of the author with meretricious fame. A single fact connected with this subject, is so rare in its character, and so expressive of superiority, that we cannot forbear to mention it, serving

as it does to show, a devotion to the public good, rather than the pursuits of selfishness. It is no easy matter to stand in the channel of a mighty torrent, without being swept away by its flood, and there are but few who can resist the current of popular applause with firmness enough to prevent them from being drawn by its vortex into the commission of acts of folly and indiscretion. John Ramsbotham belongs to the few who have resisted, for after having by his publication of the "1st Part of Practical Observations in Midwifery" presented the Obstetrical department of his profession one of the most valuable gifts in its possession, when by general acclaim he was hailed as a benefactor of medical science, and an unusual *aura popularis* had been excited by the character of the work, and the public were panting for a repetition of his favors; unseduced by applause, uninebriated by these intoxicating draughts, he had the good sense to stand firm and erect, and then toiled through ten years farther experience, before he made his second bow to that public, which had honored his *debut* with so much approbation. This is no minor merit, for the exhibition of such a characteristic, is surety for the possession of other and high attributes. A single view of a landscape from a favorable position, gives a better idea of its character, than many views from indifferent points, and there are certain single acts of men, which abstracted from all others, pourtray the properties of the individual better than a long series of indifferent developments. As such we view and honor this forbearing calmness of Ramsbotham, and should rejoice in a more general adoption of the trait.

Like a true medical philosopher he stood aloof from the whirl of applause, that would have intoxicated inferior minds—he determined to be a man, rather than an idol, to be useful, rather than sacrifice philosophical research upon the shrine of mere personal huzza. He patiently waited upon nature, eyed her with constant vigilance, observed her in her mysterious walks, and followed calmly in her footsteps, comparing the various results of extensive experience, for the purpose of benefitting the human race, through the truths of

science. The work on our table, is the result of this pilgrimage of mind.

It is deemed unnecessary to enter into a detail of the principles of the First Part *in extenso.* The profession has long since stamped the seal of its approbation upon the merits of the work, and the various publications since that time, have not been equal to the task of displacing it from public esteem. In some respects it may be said to have been a *vox clamantis in deserto,* if we take into consideration the sterile character of former observations upon certain principles especially connected with the treatment of "flooding." Under his philosophic touch, a chaotic mass took form and symmetry, and light, the first begotten of truth, chased away forever the shades of darkness, which had long brooded over this point. All this was accomplished by pure reasoning upon established fact, and by plain addresses to the judgment, of a character to win and fix conviction. There were no attempts to jostle reason from her throne, by stunning propositions calculated to dazzle the eye; there was an absence of all effort to carry the fancy captive, by eloquent declamation, and in place of these, we have direct appeals to the mind in its calm retreat. The object in view was worthy of such efforts, and well has that object been attained—a plain road was made to success, and its maker worked to secure that end, rather than risk its loss by stopping to ornament the sides of the road with flowers and arborescent beauties. Upon the good effected by the principles contained in the "Practical Observations" of John Ramsbotham, during the last ten years, we would be willing to rest the claims of medical science, to the gratitude and respect of our species.

But we must resume the consideration of the matter, more immediately before us, and are gratified in being able to say with truth, that the 2nd Part of "Practical Observations, &c." fully sustains, if it does not enhance the reputation acquired by the preceding publication. The stores of valuable matter, have been greatly augmented, and the same honesty of mind presides over the details—there is the same rigid scrutiny of

natural phenomena, cautious and safe inference from fact, and fixed resolution to "sacrifice all prejudices and partialities to truth, and to sacrifice it to nothing whatever." It does not purport to be a treatise on Midwifery, but is simply "observations" upon certain highly important features of the art, some original matter, and some researches confirmatory of the practical views of other eminent obstetricians. For this reason we shall not confine our remarks exclusively to the work of Ramsbotham, but endeavor in noticing the three great subjects of "transverse presentation," "uterine hemorrhage" and "puerperal convulsions," to present in a connected manner the views of several eminent authors of recent date. We are sure that we cannot discharge a more acceptable duty to our readers. The cases detailed by the author before us, have also many claims to attention, and it shall be our endeavor to make a selection of the most interesting ones bearing upon the subjects treated upon in the review.

In the order prescribed, the "shoulder presentation" is our first subject for consideration, and it may not be amiss to remark that the principles applicable to the treatment of this form, are suitable to all the varieties of the true transverse position. We feel that there is a necessity for dwelling with some degree of minuteness, upon the subject of the treatment of this dangerous and troublesome presentation, for ever since the days of Denman, there has been an unfortunate disposition among obstetricians to try in these cases, what may be called in fashionable parlance—the expectant method. The "spontaneous evolution" under the high authority of Denman, commended itself at once by its propriety of action, and its fine adaptation to the end in view, but unfortunately no reliance can be placed upon it. Practically considered, it is nothing more than a chimera, because we have no means of judging, when this fortunate movement may be looked for, and while waiting in high anticipation for the "evolution," we have many chances of being greeted with a "locked case." Its extreme rarity, and uncertainty are strongly condemnatory of delay in waiting for it, for an able French writer has declared with great truth, that

"a thing which only happens once in ten thousand times, never happens at all." It is evident too that Denman did not understand the nature of this evolution, because he thought the arm rose considerably towards the fundus, which was first disputed by Gooch, whose view of it has been amply confirmed by subsequent observers. The process is in nearly all cases a fatal one to the child, and consequently is not worth much procrastination. It is at best a mere straw, thrown upon the billow, and while catching at it, we may procrastinate assistance to a point, beyond the favorable moment for turning, and thus endanger the life of the mother, and sacrifice that of the child. The statistics furnished by Collins of the Dublin Lying-in Hospital, must be satisfactory in reference to this view of the matter, for he testifies that "in thirty-four thousand five hundred and seventy-six deliveries" in the Dublin Lying-in Hospital, the spontaneous evolution was only said to have occurred once, and even that one exception, is made on the dubious authority of a midwife.

A fact of this character should settle the question at once, and banish all thoughts of "spontaneous evolution" from our practice. The suggestion of Ambrose Pare, for turning the child, is adopted by our author, and ably advocated—He says:

"Having satisfactorily ascertained that the shoulder is the presenting part, one general rule of practice is applicable to every case of this kind, if the period of gestation is nearly completed. The adverse position of the child must be changed by the hand; in other words, the child must be turned, and brought down by the feet. In adverting to this mode of management, as a general principle, let it not be supposed, that natural expulsion is never effected when the child is thus situated; but such expulsion is so seldom accomplished by uterine agency alone; so great a degree of hazard is also incurred by awaiting that rare event; that it has now become the established practice to turn the child by art, as a preferable, and a far less dangerous mode of proceeding."

This very rational practice has the authority of Collins of Dublin, and Blundell of London in its favor, and in order to make the most of it, we shall endeavor to give the gist of their several observations upon the execution of the recom-

mendation, and if great caution is not used, a bungling practitioner will find the term execution, applicable to his deed. We will suppose then, that a medical man with a proper view of his responsibilities under these awful and dangerous circumstances, is at the bedside of a patient, and has determined upon making this cross presentation, a footling case at a seasonable moment, the important point before him is to know what that seasonable moment is. That fortunate point of time must be patiently waited for, *and never suffered to pass unimproved.* An external examination as made by the ancients, may go so far as to excite a suspicion, and that suspicion should be either converted into justifiable repose, or into faith by an accurate examination *per vaginum.* That a practical proceeding cannot be the result of a suspicion arising from an external examination, is very true, but it may awaken a vigilance that may be of great and manifest advantage. If then it be found, that "the uterine tumor possesses an increased breadth from hip to hip, with a diminution of extension upwards, the inference is plausible, that the fœtus does not occupy a natural position." And if the presenting part does not under sharp uterine pains, readily come within the usual range of the finger, there is an additional reason for suspicion and constant watchfulness, until the nature of the case is satisfactorily determined. It may be necessary to introduce the hand into the vagina, and the accoucher will do well to bear in mind that his hand is not in the mouth of a cave, but in a sensitive part that must be greatly injured by rough usage. Having satisfied himself that it is a shoulder presentation, if the mouth of the womb is opened to the size of a crown piece, dilatable in any degree, the fingers should be cautiously introduced and search made for the feet during the absence of pain, and when the membranes are flaccid. The hand should be passed up next the pubes, "relentingly, tremblingly" says Blundell, towards the abdomen of the child, and in the direction of the umbilicus of the mother, as the feet are mostly to be found in the fore part of the uterus. If uterine pain comes on while the hand is within the womb, all exertion on the part of the accoucher must cease during the

pain, and he must be careful in this inaction, to lose no advantage which has been gained. This part of the operation deserves great caution, needs indeed, high manual dexterity, and great forbearance on the part of the accoucher against a hasty movement, for a wound may be inflicted fully equal in its effects to any made at Waterloo. The foot is found, be cautious it is not a hand, and should be brought down into the vagina with great care, and there it should be secured with a ribbon loop. It is not necessary to bring down both the feet. It is not always an easy matter to find the feet, even after the hand has reached the cavity of the womb—indeed the fingers may come within reach of the feet, without being able to succeed in grasping them. Under these circumstances, the hand should be carried to the knees of the child, and slowly and gradually moved down the legs, until the feet are reached. But if the fingers cannot seize the feet, let them rest as near them as possible, and then direct the mother to turn slowly, so as to "bring the feet to the fingers, if the fingers cannot be brought to the feet." By this means this desirable point may be gained. These are the leading steps necessary to success in turning, and it will at once be perceived, that it demands an exercise of no common powers of mind, for the hand must be directed and controlled by the mind. As an evidence of the happy effects of this process of turning we are informed by Dr. Collins, that of thirty-three shoulder presentations, in the Dublin Lying-in Hospital, turned into footling cases, *twenty of the children were born alive.*

The various evils resulting from untimely delay should not be suffered to pass unnoticed here. Let us then take a step nearer the great dangers of this presentation, and imagine that we have lost the moment most propitious—that the membranes are ruptured and the water drained off, what then shall be done? The turning process now admits of no delay—the energies of the uterus are increased, its parietes more closely apply themselves to the fœtus, and the only hope for success may vanish like a meteor. "The hand of the child is probably in the *os externum*, and the shoulder and a

part of the chest occupies the brim or some part of the cavity of the pelvis. This condition of things must be changed, the shoulder and chest must be dislodged in order to make room for the breech; and this dislodgment must be effected by gradually pushing the shoulder upwards, aided by the protruded arm as a lever." This operation requires great patience on the part of the practitioner, and he should persevere until he converts the untoward affair into as perfect a breech case as possible. Patience and skill are the requisites, and manual force should be laid aside in a great degree. Let the accoucher remember that he has a mother under his inflictions, and he must make them as light as his duty will permit. Blundell in lamenting the uncertainty of "spontaneous evolution," says with great force and propriety, "happy would it be for the mother and child, if under the arm presentation as under that of the nates, the fœtes might be expelled unaided by the accoucher. Many a vagina would be saved, many a uterus hereafter to be torn, would be preserved, and many a death which must now take place in the course of the next few years, would be prevented!" Fortunately for us, these things do not frequently occur, yet on this account, as well as a consideration of the many dangers which beset these cases, we have dwelt upon the matter at some length. And it would be a happy thing indeed, if the dangers involved in this matter, ceased at the point which we have reached, but they do not, and we must progress farther in the catalogue.

Having summed up the features of cases, admitting of being turned, the next appropriate step is to examine those circumstances which either materially interfere with, or forbid the operation.

The most important feature of this first species, is where the waters are evacuated at an early period of the labor, and the os uteri so little opened as to prevent a satisfactory knowledge of the character of the presentation. During this condition of things the arm protrudes into the vagina, and the os uteri envelopes it so tightly that the passage of a single finger is inadmissible. This rigidity of the os uteri must

be removed of course, and the lancet is undoubtedly the very best remedy in such a case; if the pulse will permit its use. Collins recommends the administration of the following mixture, in tablespoonful doses, every half hour until the effect desired, is accomplished:

Aqua Fontana, ℥ vj.
Antimonium Tartarisat, vj. grs.
Aceti Opii, gtts. xxx. M.

As soon as the mouth of the womb is sufficiently relaxed, the process already recommended should be adopted without delay.

Those circumstances which seem to forbid the attempt at turning, are the following; where the waters have been long discharged, the uterine action powerful, the body of the child forced low into the pelvis and firmly impacted. The putrid condition of the fœtus certainly would render the use of instruments the preferable mode of delivery. In the first array of difficulties, we have tolerable assurance that death has already taken place, and this fact may be verified by the stethescope. In such a train of difficulties, the instruments are certainly the least hazardous resort. Of twenty-one cases reported by Ramsbotham, of transverse presentations, in which four were turned, one a twin case, fifteen cases were delivered by the aid of instruments, and two by the natural efforts, in one of the last mentioned cases, the child was born, folded up. It is but just to add that in nearly all these cases Ramsbotham was not called until a late period of the labor. We present our readers with a few cases from this author.

Case Ci. *A very Difficult Preternatural Case; the Shoulder Presenting.* About ten at night, February 22d, 1809, I was called to the assistance of a respectable woman, in Fleet Street, the mother of several children, who had been in labor all the day under the care of her usual medical man. The membranes had given way about four in the afternoon, when a hand came down; upon which an attempt was made to turn the child which proved unsuccessful; and similar attempts had been made in the interval. A considerable time had been wasted in quest of a particular accoucher, who could not be found; and between nine and ten, the husband came to my

house. On an examination, I detected the shoulder at the brim of the pelvis; both hands, with the funis without pulsation, down in the vagina; the uterus firmly contracted upon the child, and the pains violent and expulsive. I made an attempt to introduce my hand within the uterus, and after some perseverance, I did partially succeed, yet not to that extent as to command a foot; but, after some time, my hand became so cramped, and so completely useless, that I was obliged to withdraw it. I now thought of decapitation, but how to accomplish that act, I at that time scarcely knew. The late Dr. Combe had shewn me, a short time before, a pair of decapitating scissors, which he considered well adapted for that purpose; I procured that instrument, but I found it in my hands entirely useless; being unable to surround the neck of the child. We then determined to call in Dr. Combe himself, under the idea, that he might use his own instrument more dexterously. Upon his arrival about midnight, he made an attempt to decapitate, but was also foiled. Upon this Dr. Combe introduced his hand partially within the uterus, and after much perseverance, he got a finger over one of the hams, and fixing there a blunt hook, he brought down a foot to the brim of the pelvis; being now sufficiently tired, he returned the management of the case to me. Seizing this foot I gradually got down the leg; and making my purchase downward by the leg, at the same time, with my other hand pushing up the shoulder, I at length succeeded in bringing down the breech, and in finishing the delivery. Dr. Combe was nearly two hours in effecting the first part of the operation, yet there was no appearance of blood, and the pains were strong throughout. The next day this woman, notwithstanding the length and degree of her sufferings, appeared uncommonly well, and recovered as soon as after any of her previous labors.

Case Cii. *A Shoulder Presentation turned with difficulty.* About the middle of the day of Tuesday, November 19th, 1816, a messenger was despatched from Stepney, to procure my immediate attendance in a case of difficult labor. I there learnt that the process had commenced on the day preceding; that the membranes had ruptured many hours before; that the shoulder was presenting with the arm down in the vagina; and that attempts had been already made by two medical men to deliver the woman without success. Upon making a vaginal examination, the right arm was low down in the pelvis with the shoulder at the brim, and a portion of the ribs firmly impacted in the cavity; the head of the child was placed anteriorly and reverted: the breech was directed posteriorly,

and rather to the left side; and the uterus felt strongly contracted upon every part of the child. Looking at the degree of tonic contraction which the uterus had already acquired, my first impression was to sever the head from the trunk; but I soon found it impossible to put that intention into effect; for the head was so reverted by uterine action, that I could not pass my fore-finger over the neck of the child. The pains continued strong and expulsive. I had now no other alternative than to attempt to turn the child; having at that time never performed the operation of perforating the chest, and not daring to trust to Dr. Denman's process of the spontaneous evolution. I, therefore, carefully and resolutely commenced the introduction of my hand, and finding that I gained a little advantage in pushing up the descended parts, I persevered onward, until I had passed the shoulder, and was able to lay hold of a foot, which I brought down to the brim of the pelvis. Now pushing up the shoulder and ribs with my left hand, while my right hand was employed in pulling at the leg, after considerable exertions, I at length succeeded in bringing down the breech, after which the rest of the delivery was presently accomplished. The next day some alarm was excited by the sudden accession of a smart rigor, followed by heat upon the skin, quickness of pulse, and pain at the lower part of the belly; but by a free abstraction of blood, a large dose of calomel, and subsequent purgatives, these symptoms were speedily relieved. From this time the woman gradually recovered.

Although in this and the preceding case, the women ultimately recovered, I should not again, especially with the practical information I have now obtained as to other and less objectionable modes of relief, have recourse to delivery by turning in similar cases. In its place I would resort to perforation of the chest, and to subsequent extraction. In the above case, natural expulsion might possibly have taken place; but having witnessed no previous instance of the kind, I durst not wait in expectation of its occurrence; besides all parties were urgent for immediate delivery.

Case Cxiv. *A Shoulder Presentation attended with unusual difficulty.* About 4, P. M. on Monday, February 27th, 1826, I was summoned to the assistance of a respectable woman in the parish of Whitechapel, the mother of a family, under a state of difficult labor, attended by a professional man, who gave me the following account:—"He was called to this patient about four in the afternoon of Sunday, in consequence of the rupture of the membranes, and the sudden discharge of the waters; he remained in her room for some time, but

seeing no symptom of active labor, he left the house without making an examination. He was recalled about ten in the morning of Monday, and even at this time, the labor-pains appeared but slight. About twelve at noon he made his first examination, and found both hands down in the vagina. Upon this he made an effort to turn the child, and after some trouble, he succeeded so far as to pass his hand into the uterus, to lay hold of a foot, and to bring it to the brim of the pelvis, but his best endeavors did not enable him to dislodge the shoulder, so as to permit the breech to descend. He then attempted to pass his hand into the uterus a second time in search of the other foot, but the contracted state of the uterus prevented its entrance. In this dilemma he begged my assistance."

On an examination, I met with both hands down; the left hand was quite external and swollen; the right hand was higher up in the vagina; I could also just reach the foot at the brim of the pelvis. The child was laid across the pelvis with its breech upon the left ilium; with the head, bent backward, upon the right ilium; the back of the shoulders and part of the side of the chest were firmly impacted in the brim of the pelvis; the uterus was strongly contracted upon all the parts of the child; and a hand placed upon the abdomen detected the uterine tumor to be solid, small, and irregular. Under such a perplexing complication of difficulties, I hardly knew what step to take. Decapitation was impracticable; for the situation of the head prevented my reaching the neck in such a manner as to surround it with my instrument. A noose was got over the foot at the brim of the pelvis, which seemed to offer a purchase for traction downwards; but after exerting a considerable degree of force to push the shoulder out of the way without success, I was obliged to relinquish the idea of delivery by that mode. I had therefore no other alternative than that of perforating the chest, and of exviscerating the cavities, to which I had immediate recourse. After some time, I got a blunt hook fixed upon some part of the pelvis of the child, and procuring a sufficient purchase, I had presently the satisfaction of finding that I was gaining ground; and proceeding onwards in my exertions, I succeeded in extracting the breech under the doubling of the trunk, after which the labor was soon finished.

The day following this lady seemed as well as could reasonably be expected; with the exception of a sense of weariness, and of some tumefaction of the external parts, she made no complaint; and for several days afterwards she was promising to do well. But on the Sunday following, March

5th, the tongue and inside of the mouth became beset with aphthous appearances; the patient complained of great debility, and had a quick pulse. From this time she daily became evidently worse, and went on suffering under various distressing symptoms, but without the appearance of any particular uterine affection, till Sunday, March 12th, when she had a violent attack of rigor. From this time she gradually sunk, and expired on Wednesday, March 15th.

Can it be supposed, that the aphthous state of the tongue and mouth was in this instance symptomatic, or indicative of any affection of the uterus, or of its lining membrane? I must confess such was my idea at the time. I think it probable, that membranes of similar structure and function, although not apparently connected by continuity, may be similarly affected under diseased action.

This case, as well as several others which I have detailed, strongly evinces the impolicy of continuing to be, for any length of time after the rupture of the membranes, a passive spectator of the progress of a labor, as I have already remarked. It is an important part of professional duty then to explore and to determine the presenting part; by the conclusion thence derived, must the future practice be entirely guided. Inattention to this point, has caused the several patients an increased and a protracted degree of suffering, which a different line of conduct might probably have prevented.

Case Cxix. *A Case of Natural Expulsion under a Shoulder Presentation.* About eleven o'clock in the evening of Saturday, January 22nd, 1820, I was summoned by a note from one of the midwives of the charity, to the assistance of a poor woman near Whitechapel, which stated, "that about three in the afternoon, her patient had been seized with a flooding which presently ceased; that the membranes had just broken; that an arm had come down; and that the labor-pains were very violent." I was from home at the time the note was delivered at my house, but it was presently forwarded to me, and I arrived at the address within an hour from its date. On entering the patient's room, I was told, "*it was all over;*" a dead child was shewn to me, which had been born some time, and the midwife had left the house. Surprised at this account, I was anxious to know the facts of the case; and I requested the midwife, who was one of the most intelligent and experienced women of the charity, to transmit to me a statement in writing of the mode, in which this case went on, and was terminated. I will, therefore, transcribe her history of this unlooked-for event.

"I was called to Mrs. S. at four in the afternoon, and found her flooding; I gave her the acid drops, which had the desired effect. At eight in the evening labor came on, but the os uteri was high and rigid. The membranes formed largely, and I could have no idea what the presentation was; I, therefore, deemed it most prudent to let them rupture of their own accord, and to my consternation, the right arm presented. I wrote for the doctor; the pains became so strong, that the hand was soon through the externals. I entreated the woman not to bear her pains down, and I endeavored to keep the arm back, but in vain. The shoulder passed the pubes to the externals; and the perinæum began to be protruded so very largely, that I was obliged to direct my attention to it. The side began to advance with the hip, the breech, and the legs, and lastly, the head. The child was still-born; the mother is doing well." J. H., January 30, 1820.

In these cases, a tolerably accurate picture is given, of most of the dangers and difficulties of transverse presentation, and we devoutly wish that the lights and shades would have admitted being blended in a more pleasing and imposing manner. Truth however renders the shadows dark, and we could do no less than draw the details fully and accurately. The principles are highly important, and should be maturely weighed in all these untoward cases, for a single mistake may throw two beings into the arms of death, who may be saved under proper treatment. We have known the most absurd and butcher-like practice resorted to, in these presentations, and consequently feel the necessity of aiding in giving currency and circulation to sound, safe and philosophical views of practice. That they will be found such on trial, we feel the fullest confidence, and commit our remarks to the deliberate judgment and trial of humane and scientific accouchers.

UTERINE HEMORRHAGE.

In turning our attention to the subject of uterine hemorrhage, we propose, in reviewing Ramsbotham on this point, to glean from his able contemporaries, as we have on the preceding subject, all the practical matter, that may under any circumstances, be useful in carrying patients safely

through the dangers of this frequent occurrence. Our investigation will be confined to hemorrhages occurring during the latter period of gestation, parturition, and after delivery, and in order to present the subject fully, we shall bring forward some of the prominent materials furnished by Ramsbotham, with a similar view.

After clearly laying down the invaluable principle and placing it conspicuously before us, that the contractile energies of the womb, are the important means for arresting hemorrhage, he enters into an examination of the relation of the maternal and fœtal portions of the placenta to both mother and fœtus. He remarks: "the mass itself is strictly fœtal, and is formed for the sole advantage of the child. Now if the substance of the placenta be lacerated, the blood lost must be fœtal. But if any part of the placenta be detached from the uterine surface, the discharge thence ensuing, is a portion of the blood, previously circulated through the mother's system; and the symptoms supervening thereupon, are in proportion to the quantity and to the velocity of the effusion. Hence is deduced this important fact, a fact indeed of the greatest practical value, and which ought ever to be retained in the memory;—"that during the whole term of utero-gestation, as well as under the process of labor, a discharge of blood from the vagina can only arise from the detachment of a portion of the placenta from its adhesion to the uterine surface; and that the blood which escapes, is maternal." p. 115.

We are next led to investigate the effects of the loss of blood, upon the system of the mother, and these are very ably expressed by our author. We quote him fully upon this point:

"Although we generally find that the symptoms induced under an attack of uterine hemorrhage, are relatively proportionate to the quantity of blood lost, yet the celerity with which it escapes is a matter of very great importance; both as to its present effects, and to its future consequences. When blood flows rapidly, in a fluid state, and in a sort of continued stream, the system soon begins to feel the injurious influence of its loss, and to shew obvious marks of considerable affection. When it flows more sparingly, exuding as it were

drop by drop, or when it is discharged in larger or smaller coagula, the constitutional impression is brought about more gradually, and of course is longer deferred. But under either state, the powers of the system sooner or later decline, under a continued drain.

But occasionally, indeed, we may observe the sudden appearance of symptoms indicative of greater distress and danger, than the quantity of blood, which appears externally, would seem to account for. Under such circumstances, in all probability, blood is escaping into the uterine cavity, and hemorrhage is going on internally. Of the actual quantity, which may be thus extravasated, we must remain entirely ignorant, since, for the present at least, it is concealed from the view. We see its effects in the symptoms induced, and judge accordingly."

We cannot stop to comment on this plain and pointed statement for it is so satisfactorily presented, that it does not need any thing to enforce it. We pass to the remarks upon the influence of temperaments, in counteracting the general effects of hemorrhage, for they must play a prominent part in enabling a female, to bear the loss of blood. Hence we are informed that "a woman of a thin spare appearance and of active habits, usually bears the loss of blood better, and rallies from its effects sooner, than a woman who has been accustomed to every species of indulgence and who, at the same time, is disposed to corpulency. Women of the former description will sometimes suffer under very extensive floodings with little apparent injury; nay, almost with impunity; while those of the latter class will be irrecoverably depressed by a comparatively trifling loss of blood." By keeping these facts before our minds, we are enabled to direct our energies with a proper understanding, because we have data before us, from which to make our calculations. From understanding the temperament, we know what we may reasonably look for in each individual case, but the main importance of the observations, would have dwindled greatly, without the following fact,—"But the same woman is not able, *at all times*, to contend against the effects of hemorrhage of equal apparent magnitude; for we constantly see, that the same woman is very differently affected at one time than at

another." It is necessary for us to bear this truth in memory, for medical men are carried away at times with a very great fallacy, not only in relation to the varient influence of the same apparent circumstances, at different times, in Uterine Hemorrhage, but in other derangements of healthy action. It is quite a popular idea, that because patients have struggled through a certain series of difficulties in one attack, they will be able for the future to bear themselves through triumphantly on all similar occasions. Hence we often hear the consolatory reflection made in the sick chamber, by both physician and nurse, that the patient "must get through, because she is no worse than she was before," and yet our daily observation teaches us that this is an egregious error. It may do well enough for popular condolement, but is a very indifferent display of medical logic and philosophy, and we cannot be too wary in guarding ourselves against such loose fantasies. Let us then form our prognosis, not upon the result and circumstances of a former attack, but upon the attendant symptoms, deliberately and maturely weighed, the present effect upon the system, and the rallying power of the sufferer. And what are the indications of danger? We answer in the words of the author:

"When a continuance or repetition of uterine hemorrhage has induced a sense of faintness, a pallid countenance, and a quick languid pulse, the situation of the woman is becoming hazardous, and the case ought to be watched with care and vigilance. But when to such symptoms are superadded coldness of the extremities, difficult and labored respiration, involuntary sighings, a sense of stricture across the chest, and a general convulsive tremor, danger is becoming imminent. Yet even in very extreme cases, the appropriate means of relief are not to be entirely neglected. Singular instances of recovery, under apparently the lowest ebb of life, are occasionally seen, especially when the depression has been immediate and sudden; and when the loss of blood has soon ceased."

It should also be borne in mind that hemorrhages in the early months of gestation, are not so dangerous as those occurring in the latter months. Consequently we shall endeavor

to fix the minds of our readers, rather upon the dangerous point, than that which is more annoying, than dangerous. And in the treatment, to say nothing of the etiology, of the hemorrhage of the latter months, we are glad to find Ramsbotham an able advocate for philosophical practice, rather than the mawkish mode, which flies from point to point on the hunt for something that has "done good," in a former case, without one principle to direct, or one pathological idea to control the use of remedial agents. We commend the following remarks, to the enlightened judgment of accouchers, and beg them seriously to reflect upon the character of the foundation on which they rest. But we give way to our author; the extract is long but will abundantly repay perusal:

"Should a woman be assailed towards the close of pregnancy with an attack of hemorrhage, and should that hemorrhage spontaneously subside, without inducing any injurious, or prominent symptoms; she ought, nevertheless, to regulate her conduct during the remainder of her term, by the strictest rules of prudence. Until she is safe in bed, she is liable to a return at any hour, and under any situation, even without the least previous warning; and she is sometimes not aware of its return, until she perceives the discharge coming away. Under this uncertainty, but with a chance of a return, a total abstinence from bodily exertion should be strictly enjoined; and, if situation in life will permit, a state of positive quiet upon a bed or a sofa. This cautious conduct becomes absolutely necessary to the security of a woman so circumstanced; for if the discharge has been the result of a separation of even the smallest portion of the placenta, the quantity separated may be easily increased; and when any uterine vessels have been once opened, they may be again readily forced by motion or exertion.

Little advantage is perhaps to be expected from the internal exhibition of medicines; yet custom has sanctioned their use. The more a man reflects upon the cause and nature of the affection, the more must he be convinced of the uselessness of most internal means; at least so far, as to induce him to place no great reliance on any specific virtues, they may be supposed to possess. Of the positive efficacy of those articles termed astringents, I have considerable doubts. The various preparations of lead appear to me inadmissible, from

their injurious effects upon the bowels. Opiates are perhaps no otherwise useful, than in tending to lessen that nervous excitement, which is produced by apprehension. Moderate saline aperients are occasionally beneficial. I cannot speak decidedly of the beneficial effects of the *secale cornutum* from my own experience; but many of my professional friends entertain high opinions of its valuable properties in inducing uterine contraction. But I have long been averse to general blood-letting; upon this principle, that uterine hemorrhage is of the passive kind.

Yet although the internal exhibition of medicines may have but little effect in the suppression of uterine hemorrhage, I am ready to admit, that other means prove highly beneficial. These means principally refer to the personal management of the patient, and to the regulations of her room. She ought to be confined to a reclining posture, under a state of the strictest bodily quiet; to abstain from all stimulating and hot fluids, as well as from solid animal food; and in their stead, to be allowed the free use of cold acidulated fluids and ices. The application of cold over the region of the uterus, to the loins, and to the external parts; the injection of cold fluids into the rectum; and the occasional use of the plug, are not without their temporary advantages. But the external use of cold, whether in the form of iced fluids, or of solid ice enveloped in a bladder, requires, in my opinion, considerable discretion, especially under a state of exhaustion. I have found, in most cases, its temporary application more beneficial, than a regular perseverance in its use for a length of time. I therefore generally recommend that it should be applied for a given time, that it should be withdrawn for an equal time, and that it should be repeated; to permit a return of natural warmth in the intervals. The windows of the room may be opened, the patient may be allowed to breathe a cool air; and the coverings of the bed may be made light. But in cases in which exhaustion seems approaching; in which the vital powers are giving way, it may become imperatively necessary to have recourse to strong stimulants, to keep up the action of the circulating system."

The views given by Ramsbotham on the use of internal remedies, such as astringents, &c., cannot be estimated too highly. We can add nothing to his objections, for if the reasons given in the foregoing quotation, are not satisfactory, the incredulous would not be convinced by any logic that could be offered.

Having now placed upon the canvass the general features of this interesting subject, we shall at once proceed to fill up the outlines, and endeavor in the detail, to make the picture complete.

First in order, is that form which occurs in the latter months of pregnancy, and is to be considered under two heads; *accidental and unavoidable hemorrhage.* And inasmuch as hemorrhage under pregnancy can only be the result of a separation of some part of the placenta, from its adhesion to the womb, that hemorrhage arising from this detachment, when the after-birth is placed at its usual or most common point of adhesion, is called *accidental*, while the term *unavoidable* is applied to the hemorrhage following any separation of the placenta when it is placed either entirely or partially over the os uteri, because that opening cannot extend itself in the natural developement of the womb, without separating some part of the placental mass. It is the first duty of the accoucher to be vigilant when called to flooding under either of these forms, and after having given every recommendation necessary to arrest the hemorrhage, remain upon the alert, and if it should continue to return frequently, he must decide the nature of the case by a cautious and deliberate examination *per vaginam.* False delicacy carried too far, or that fallacy which teaches that nothing can be done unless uterine pains are present, may destroy the life of the mother, as I confess with bitterness of heart, I came very near doing once, by modesty improperly exercised. Blundell speaks so impressively upon the fallacy referred to, that we cannot do justice to the subject so well, in any other manner, as to quote him. We trust his words will sink deep into the minds of young accouchers.

"You are called, perhaps, to a case in which the blood comes largely from the uterus; you ask the patient, and properly, whether she feels the uterine pain. No, is the reply. Will you then act upon the silly rule? Will you tell the patient, come what may, I can give no manual assistance, because you have no pain! None I hope will be guilty of such folly. In flooding cases, the truth is, with the pains you have very little to do; it is with the flooding—it is with the dan-

gers, that it is your duty to contend, and from them, if possible, the woman must be rescued, whether there be pain or not. If a female loses one gallon of blood in one pregnancy, and recovers from the effects of the waste, there is no reason to suppose that she can stand the loss of a quart in the succeeding pregnancy. Indeed, the loss of that amount may destroy her life in the repetition. A woman sitting quietly in her apartment, being seized suddenly with a large eruption of blood from the womb, a practitioner specious enough, but of small experience in these matters, was promptly called to her assistance. Have you any pain? was the question. No, was the answer. So acting on the silly rule, without even examining whether the placenta was lying or not over the mouth of the uterus, the practitioner went his way. The flooding continuing he was summoned again, and again he acted on the silly rule, there being no pain, he still determined that nothing could be done; so he went home, went to bed, and went to sleep! How one envies such philosophical composure! But we bear the dangers and misfortunes of others with truly admirable resignation. In the middle of the night his repose was broken by the tinkling of his bell, the noise of his knocker, and the clamor of voices—a third summons had arrived: to the house of the patient, therefore, he went a third time; and there he found her dead! with the child in the uterine cavity, and the plecenta lying over the mouth of the womb, the parts so relaxed and open that the abstraction of the ovum, would have been a very easy task. Beware of the silly rule. In general, to die is no jest—*nor is it a jest to die even by the kick of an ass.*"

Guessing is a dangerous business in these cases—nothing short of the most absolute certainty should satisfy an accoucher called upon to assume the responsibilities attendant upon these "floodings" and an examination *per vaginam* can alone give full assurance. And this point should be gained in all cases where the hemorrhage occurs in the latter months, and produces those constitutional effects which give note of approaching danger. Be watchful of the pulse, countenance, breathing, and state of the skin. It should constantly be remembered that these floodings in the last months produce much more debility, than the loss of the same amount of blood, or even more in the early months. The man therefore who neglects watching with unceasing vigilance these

cases of *accidental or unavoidable* hemorrhage, must prepare himself for losing a great proportion of his patients. However, these remarks belong more appropriately to another part of this paper, and we recur to the vaginal examinations in order to make a clear pilotage to safety in these hemorrhages.

What are the means by which we are to ascertain the true state of things? Let us mark the steps of investigation in their proper order. First then, when we find the hemorrhage increased with each uterine pain, it is strong evidence that it is a case of *placenta previæ*, because the pains increase the flooding in this variety, whereas, in the *accidental* form, the flooding is diminished or suspended by the pains. If upon the introduction of the fingers into the vagina we find "a flaccid membranous bag with the presenting part within it, distinctly perceptible, the case is at once determined to be one of *accidental* hemorrhage. But if, instead thereof, a stringy flesh-like substance, adherent around the inner surface of the os uteri, be met with, the case is shewn to be one of *unavoidable* hemorrhage." But these distinctions are not always so clearly presented by the uterus to the fingers, as they are to the eye, on paper. We may mistake a firm coagulum, for a placenta, and as the dangers resulting from such an error, might be serious in their character, we quote Ramsbotham's distinctive signs. "The placenta imparts to the finger, the sensation of a fibrous flesh-like mass, *adherent* around the inner edge of the orifice, and during this inquiry, especially if the fingers be pushed upward with a slight degree of force the hemorrhage is temporarily increased. But the coagulum has a smooth surface, even to the touch, it possesses a less degree of resistance than the placenta, and may be easily penetrated by the finger, or made to recede."

Let us now turn our attention more particularly to each of the forms of hemorrhage we have been considering, and we begin with *accidental* hemorrhage.

The occasional occurrence of flooding of this form, demands attention in order to mark attentively the effects upon the general system, and though slight losses of blood may be

borne with apparent impunity, it is only apparent, for whether the gush of blood be great or only a slight drain, whether the loss be rapid and then ceases for a period, or small quantities drain off at a time, under a long protraction evils must arise, for the womb cannot repeatedly lose the smallest amount of blood without endangering to some extent the integrity of the gestative process. If the flooding be severe, the fœtus stands many chances, for being expelled still-born, and the mother must of course suffer. It is therefore the duty of the practitioner in all these cases, to direct the patient to take the recumbent posture, in a dark room, and all conversation should be prohibited. Every species of stimuli, in respect to diet, drink, company, &c. must be sedulously avoided. The air of the room must be kept cool, the bed clothing light, cold drinks, such as refrigerate the system, the external application of chopped ice, enveloped in a bladder, *if the pulse permits it, and the heat of the skin is such as to bear it.* General blood letting is not advisable, for that lost by the womb, has been abstracted from the general system, and we know not at what moment the hemorrhage may recur, and in sufficient quantities to satiate the most remorseless phlebotomist. But the bowels should be kept in their natural condition as nearly as possible. These are the general indications for the lighter symptoms of accidental hemorrhage, but all our therapeutic indications must be determined by the state of the general system. If we find the surface cool, faintness or syncope, the pulse feeble and fluttering, breathing oppressed, extremities cold and covered with a clammy sweat, the hemorrhage still going on, there is no time to lose, cold applications of every description, external and internal are strongly contra-indicated, and must be avoided. There is but one course to adopt, and that is to rupture the membranes and draw off the liq. amnii. It is important to ascertain the character of the presentation before rupturing the membranes, for though there may be no present intention to bring away the fœtus, yet if there should be a form of presentation that would hinder or forbid the contractile efforts of the womb, from accomplishing their object, it would greatly increase the dangers of

the case, and therefore the child should be turned prior to the rupture of the membranes. But if the position is a proper one, rupture the membranes, and let both fœtus and womb alone, unless the hemorrhage continue. Upon this point Ramsbotham, Blundell, and Collins are opposed to Burns, whose work is held in high estimation in this country, but who is certainly very erroneous, in recommending delivery to be effected as soon as the waters are drained off. We should wait in all cases to observe the effects of the rupture of the membranes, both upon the hemorrhage, and upon the constitutional symptoms of the patient. If the hemorrhage ceases, and the female rallies from her state of exhaustion, the child may safely be left in the womb, for it is sometimes carried to the full period, though generally expelled in two or three days. Merriman mentions his success in thirty cases, and Rigby in fifty-one, and thus the patients were saved the horrors of "turning." The fingers of the left hand should be carried to the os uteri, and after deciding that the presentation is a proper one, pass a female sound, sharpened at the end, up to the membranes and rupture them. The contraction of the parietes of the womb upon the child, is generally sufficient to arrest the hemorrhage completely, and at any rate to such an extent as to diminish the hemorrhage sufficiently to remove danger.

An objection has been made to this practice of puncturing the membranes, which is much more specious than solid. It is, that it may become necessary to turn and deliver, notwithstanding the draining of the waters. To this Ramsbotham replies incontrovertibly—"if the uterus contract well, and its action become effective, the child will be expelled, and if it remain indisposed to contract, it will offer little resistance to the passage of the hand for manual delivery." We should therefore watch with great care the state of the patient after the puncture, and not rashly rush into unnecessary measures. Procrastination and rashness are each attended with their dangers, and the *mezzo termine* is hard to define with accuracy—it must be determined by a clear head, sound judgment, and full appreciation of every thing connected with the case.

It must be remembered that atrocious violence, "is," according to an eminent author, "the sin in obstetrics, for which there is no forgiveness," and unnecessary delay is equally unpardonable. But, to return to definable grounds, the attempt at delivery should not be made during syncope, because the constitution is not able to bear the shock. Remembering the principle upon which aid is demanded, that it is not simply the mere extraction of the child, nor the evacuation of the contents of the womb, but to invite uterine contractions, we must determine from a survey of the case whether that object can certainly be effected. The extractive effort should be made in a slow and cautious manner, endeavoring to make the diminution of the womb, keep pace, with the rapidity with which the child is withdrawn. But in no event should manual delivery be resorted to until a fair trial has been given to the *secale cornutum*, its power in exciting uterine pains, the celerity of its action, and when of a good quality, the certainty of its power, are high recommendations for its use in these cases. It would seem, if nature has any hand in making it, as if she had made it for this assemblage of troubles, and we speak from experience. We subjoin a case from Ramsbotham in point:

Case Cxxix. *Labor under Uterine Hemorrhage apparently hastened by the Effects of Secale Cornutum.* About noon, Wednesday, March 10th, 1830, I was requested by a medical gentleman to give my opinion upon a case of flooding in the district of Finsbury. The poor woman had been seized with hemorrhage on the Sunday evening preceding, when she lost a large quantity of blood suddenly, but the discharge did not long continue. The hemorrhage returned on the Tuesday evening; upon examination at that time by the medical attendant, the head of the child was felt at the brim of the pelvis through the bag of membranes, which he ruptured. Notwithstanding the discharge of the liquor amnii, a constant colored draining was kept up through the night, with every now and then a trifling degree of pain; and this drain had, at the time of my visit, produced a state of considerable exhaustion; the woman had a pallid countenance; a weak quick pulse; and complained of a great sense of faintness. Upon a vaginal examination I found the os uteri a little opened, and relaxed; and I could detect by the finger a part of the placenta

placed near the os uteri; but no part of that mass appeared to me to have been situated immediately over it; the head of the child seemed disposed to press a little upon the os uteri during the influence of uterine action, which was slight and distant. Unwilling to deliver the woman by turning the child under so exhausted a state, and seeing a disposition to uterine action, I recommended a trial of the secale cornutum. The infusion of half a drachm was given between one and two o'clock, and was repeated in about a quarter of an hour. The medical attendant then left the house with a promise of returning shortly; but very soon after his departure, active pains began to shew themselves, he was recalled, and the child was expelled by uterine action before three; the placenta soon followed, and all discharge ceased. The woman did well.

With the following case we close our inquiry upon the subject of *accidental* hemorrhage:

Case Cxxxii. *Accidental Hemorrhage with a Hand down in the Vagina.* About half after eight in the morning of July 6th, 1816, a midwife wrote to request that I would visit a patient of the charity in Moor-Lane, who was stated, "to have been seized with a flooding under a hand presentation." I attended the call directly, and found a woman between thirty and forty years of age, pregnant of her eleventh child, suffering under the usual symptoms of a sudden and violent loss of blood. The left arm was down in the vagina; the shoulder was pushed into the brim of the pelvis; and the pains were active. With some difficulty, I introduced my hand, got hold of the feet, and brought down the breech; but in turning the child, to my surprise and alarm, the placenta escaped externally before the breech was brought down. This circumstance induced me to hasten the extraction of the trunk, shoulders, and head; and fortunately my efforts were materially assisted by uterine contraction, which continued strong and effective. During this operation, there was no material increase of hemorrhage. After the delivery of the child, the uterus felt firmly contracted, but the woman was under a state of great exhaustion; from which she was endeavored to be roused by the free use of stimulants. But every means devised for her relief proved of no avail. In a few hours she became excessively restless, with difficult respiration, and did not survive the middle of the day.

In this instance, the placenta was largely separated from the uterus at the commencement of the flooding; so much so as very much to incommode the action of my hand in search

of the feet; it seems to have been afterwards entirely detached by the act of turning. One essential point in the case deserving attention is, that after the escape of the placenta, there was no increase of hemorrhage.

Unavoidable Hemorrhage.

This form of hemorrhage, is already understood by our readers, to arise from the implantation of the placenta over the os uteri, and is produced by the natural evolutions of the uterus during gestation. Of all varieties of flooding, this is considered the most perplexing, and perilous. A healthy female, who has safely passed the annoyances of the early months, who has learnt to laugh at the dangers of abortion, and is looking forward with the buoyant joyousness of hope, to that period which is at once to terminate the doubts and fears of gestation, and begin the pleasures of a matron, is suddenly seized with a gushing hemorrhage, while pursuing her ordinary avocations. Having taken the recumbent posture, from instinct, her friends are summoned, great alarm pervades the entire circle, cautious whispers pass from mouth to ear, as if loud enunciation would fulfil the catastrophe, and in the midst of this transporting state of things, the evil genius of despair sitting grimly upon every countenance, the accoucher enters the room—let him beware of the contagion of evil forebodings. It is a part of his trade to look cheerful, no matter how sick he may be at the heart, and here are circumstances demanding all the command of himself, he can bring to his aid. He is the helmsman, who is to guide the bark through its perilous straight, and his soundings cannot possibly be made too well. With knowledge, that places him in possession of the dangerous character of the case before him, energy to go through his duty properly, and vigilance that never sleeps, to guard every point of danger, he may save his character from reproach, and a mother and child from the grave, while under the reverse, all may be lost.

What steps then are to be taken, if the hemorrhage has ceased, in discharge of these responsibilities? First, all the gossips should be ordered in the imperative mood, to leave the room, their marauding, distracting avocations, feasting

upon a case of this kind, with all the gusto of cormorants, the most perfect quietude of body and mind should be enjoined—the causes of mental emotion must be assiduously guarded against, for the heart has an agency in these hemorrhages, and should not be excited unnecessarily. The lips must be sealed with the silence of death. The avoidance of all stimuli, both mental and physical, such as conversation, light, visits of particular friends, solid food, &c., and the use of cool air, light bed clothing, cold drinks, are all that may be necessary, if there be neither hemorrhage nor pain. This is the treatment of flooding, without reference to its specific character, but if there be reason to apprehend that the placenta is improperly located, it is justifiable to ascertain the fact with certainty, by an examination *per vaginam* if it be possible. Let "caution mark the guarded way" however, for the accoucher must remember that the hemorrhage may be induced to return, by a very small amount of rough groping about the os uteri. Having undertaken the case, he must remain at his post as long as there is a lingering sign of danger, and hold himself prepared at a moment's warning to return to his patient under the following circumstances.

The hemorrhage has returned, and the blood is flowing freely, surface cool, and covered with clammy sweat, countenance of a hatchet look, pulse hesitating whether to continue or cease, breathing greatly oppressed, constant calls for fresh air, and either an entire absence of uterine pain, or of such a slight character, as to promise but little assistance. A small increase of the hemorrhage, even at a time when the patient does not appear to be suffering much from the previous loss, may bring on dissolution, and hence the necessity of keeping a keen eye upon the constitutional symptoms. It cannot be too strongly impressed upon the mind of the practitioner, indeed the fact should stand before his mind in flaming capitals, that much more debility follows the hemorrhage of the latter months, than those of the early periods of pregnancy. He must take his measures therefore according to the lights of experience, and fortunately in these cases there is but little difference among medical men—if the pa-

tient be sinking, the hemorrhage still going on, the soft parts dilated or dilatable, the practice is to turn and deliver, with the fear of hemorrhage after delivery constantly before the eyes, because the loss of a very small quantity of blood, after evacuating the uterus of its contents, frequently destroys the life of the patient. The great danger lies in forcible entry, in pushing the hand through a rigid vagina, and os uteri, and this should be avoided, unless the peril of the sufferer is such as to render this evil a less one, than permitting the flooding to proceed. There is some consolation in the fact, that a dilatable condition, often comes on suddenly under the loss of blood, and if the state of the case bear delay for this favoring state of things, it should be waited for, but let it not be forgotten that the patient must suffer very seriously if procrastination reigns too long. If the asphyxal stage has come on, a chance should be given to the system to rally, and delivery effected as soon after that as possible, and there can be no impropriety in puncturing the membranes through the placenta, if the hemorrhage be progressing, and the delivery cannot be effected on account of the rigid and unyielding state of the os uteri, for no circumstances can justify the application of force to the dilitation of that opening. The misfortunes of the accomplished Rigby in his attempts to enlarge the opening by instrumental laceration, should stand as a solemn warning against all efforts calculated to lacerate. A chance then, we repeat, is given by puncturing the membranes, in those cases, where the hemorrhage continues, and either the fainty state of the mother, or the undilated and undilatable condition of the mouth of the womb, is such as to interdict manual delivery. But if syncope be present, the accoucher must keep his hands in his pockets, he has no right to use even a finger, while that state of things lasts.

Our minds should be settled upon the mode of proceeding suited to each case, for as usual there is a right and wrong way of "turning" in this form of hemorrhage. There are two methods of entering the uterus, one, is to pass the hand simultaneously through the os uteri and placenta, seizing the feet and bringing them down, the other, is to pass the hand

between the placenta and uterus, as easily and lightly as possible until the edge of the placenta is reached, the cyst being found is then to be ruptured, and the feet brought down as before. Which of these modes is to be adopted? What are the governing principles in the case? The relative chances of the mother and child must be taken into consideration, and the election made upon the turning of the scale. In the first mode, that of penetrating the placenta, the chance is in favor of the mother, and the danger greater for the child, while in the latter, the conditions are reversed. If called early to a case, where delivery is absolutely necessary, and there is reason to suppose the mother can bear the loss of a little more blood, though this is a point that must not be decided too hastily, the chance should be given to the child, and we should pass the hand between the placenta and womb in search of the membranes, notwithstanding the risk of greater hemorrhage by this course, than by the other. But if the mother be much exhausted from the flooding, the child must be forgotten, and the safety of the mother attended to alone, by passing the hand directly through the placenta, thereby guarding against a greater loss of blood.

To sum up the directions in a few words, we are to do nothing with the hemorrhage, if it is doing nothing itself. Rest, withdrawal of all stimuli, cold drinks, &c., are all sufficient. Observe whether the hemorrhage is increased by the uterine pains, if so, we are allowed to suspect placental presentation, and should learn the fact positively by an examination per vaginam, as a guide to further proceedings, and to regulate our conduct. But if hemorrhage is still going on, we must decide upon the comparative necessity of simply puncturing the membranes, or of removing the contents of the uterus by manual assistance. In most cases, the child is still-born.

But we should do violence to the subject, were we to omit noticing an important principle in regard to certain natural phenomena in these hemorrhages, and this may lead to modes of treatment, preferable in certain cases, to those already mentioned. The matter at least deserves investigation, and if

it shall be found that a more philosophical practice, than we have detailed, can be resorted to, changing the dangerous features of "unavoidable hemorrhage," and giving security to a mother in a complication of perils, it will be an accomplishment every way worthy the art, that administers balm to the endangered and afflicted. No great triumph is gained by a practice that destroys many children, and only occasionally saves the mother, and it is humiliating to our science, that we have to apply principles, which destroy, to save. Let us then examine the subject dispassionately.

All who have noticed these hemorrhages are advised of the fact, that they are often arrested spontaneously—that severe flooding frequently occurs, and then ceases for a time, a recurrence of the hemorrhage takes place, and again nature arrests it, and thus it goes on occasionally through a number of attacks, before it becomes necessary to attempt manual delivery. This being the state of fact, it is an important inquiry to ascertain, how the hemorrhage is suppressed. We know too, that a simple puncture of the membranes sometimes arrest the bleeding, and this certainly is on a principle, somewhat analogous to the preceding one. The cessation of the hemorrhage, must depend upon one of three causes, the formation of a clot of blood in the mouths of the bleeding vessels, the inflammatory action described by Dr. Jones, set up in the internal coats of the blood vessels, by which an organized plug is formed, or the collapse of the womb upon the placenta, by which pressure is made upon the vessels involved in the flooding. Let us institute an examination of each of these modes.

First, the formation of a clot of blood in the mouths of the vessels. Is that state of things always present in these cases of cessation of flooding, most likely to conduce to the formation referred to? We apprehend not. That this is an occasional agent is admitted, but as a state of syncope, or faintness approaching it, is the only favoring condition that we know to the production of the clot, we are not warranted in looking for it, under any other state of case. Yet we find the hemorrhage effectually suppressed in some cases, when the circula-

tion runs its round in its usual manner, and with its accustomed volume, and under such circumstances, even if a clot were formed, it would be swept away by the current of blood. Hence, we are warranted in looking out some other cause for the cessation of the hemorrhage, being well assured, that in these cases, unattended with syncope, mere concretion can have no agency.

The second consideration, belongs to the inflammatory action established in the tunics of the vessels. And it is sufficient to say of this, that the suppression of the hemorrhage, is too sudden to admit the establishment and perfection of this adhesive inflammation, the process generally occupying from twenty-four to forty-eight hours for its completion. The calibre of the vessels is also too great, to justify the opinion that this action can have an agency in stopping the flooding, for admitting the aperture to be diminished by the contractile effort of the womb, it can scarcely be to such an extent as to lead us to believe in the existence of the process, we are considering. The recurrence too of flooding, not from new solutions of adhesion between the placenta and womb, but from the vessels engaged in the former hemorrhage, is proof positive of the non-existence of the adhesive plug in these cases, and therefore we are compelled to reject this process. And we are constrained to infer, that in many cases, the hemorrhage ceases under the combined influence of a partial diminution of the calibre of the vessels, and the pressure of the contracted uterus upon the placenta, it acting as a compress. For instance, if the circumference of that portion of the womb, occupied by the placenta be represented by 5, during the flooding, and is diminished by contraction of its parietes, to 3, may we not reasonably conclude, that the compressing power of the placenta materially aids in checking the hemorrhage? And is not this inference strongly supported by the fact, that we may renew the hemorrhage, by disturbing the placental mass, not by lacerating a new portion of it, but by moving the part already loose? We can form no objection to this view of the matter, but on the contrary, believe it rests upon incontrovertible truth, and if so, we have a clue to a

practice, differing from that laid down in the first part of the remarks upon "unavoidable hemorrhage." Let it not be imagined however that we advocate this practice, as suited to any and every case that may present itself. In order to success, circumstances must be favorable, and we proceed to state what in our view is essential in the use of compresses. If the placenta be but partially placed over the mouth of the womb, we should more certainly derive benefit from pressure, than when it entirely covers it. The nearer the fœtus is to maturity, the greater surety there will be in resorting to compresses, because we can then with more safety invite the action of the womb by the Ergot, while we control the hemorrhage by the pressure, and the smaller the space of time required for the use of the compresses, the greater will be the guarantee of success. But there can be no impropriety in any case, where the hemorrhage continues until the accoucher is called, in promptly resorting to the artificial plug. And if the constitutional symptoms be such as to excite fears for the safety of the mother, we have it in our power under this treatment, judiciously applied, to manage the case almost as we please, restraining the hemorrhage as long as may be necessary by the plug, and exciting uterine action by the Ergot, whenever we are prepared for it. It is scarcely necessary to add, that the good character of the presentation, should be ascertained, before we undertake to bring on uterine action. For further information on this subject we refer the reader to the cases of *Placenta Previæ* contained in the list of "Miscellaneous Cases" in the present number of the "Journal."

Before dismissing the subject however, it is proper to add, that if *accouchers* would pay more attention personally to the preparation of the Ergot, they would obtain a better article than is usually found in the Apothecary establishments. It should be gathered just before harvest, dried in a darkened room, pulverised, and corked up in bottles painted black, and they should be kept in a cool place. We know the injurious effect of light upon calomel, and it is equally baneful to the ergot. Its important offices, demands the strictest attention

to its purity and good quality, and the accoucher who prepares it in this manner, will rarely be disappointed in its effects.

We close our remarks upon this point, by adding, that if the same beneficial results, shall follow this course of treatment in the hands of others, which has attended it in ours, we shall be abundantly repaid for having called attention to it. Based upon philosophy, and sustained by facts, we have no reason to fear for the result.

HEMORRHAGE DURING LABOR, AND AFTER DELIVERY.

It will not be necessary to occupy much space, with a consideration of this branch of our subject. In those recent works, to which frequent reference has been made in the course of this review, we find but little matter important enough to require notice. The principles which govern the treatment of these floodings have been at least adumbrated, in the sketch given of the treatment of "unavoidable and accidental hemorrhage," and there is no necessity now for a minute detail of the steps to be taken in the management of such cases. The contractile power of the womb, is the great lever of success in both forms of hemorrhage, now under consideration, and whatever may bring that about, under proper circumstances, must secure the patient. However, let us glance at the matter before us.

It is by no means an uncommon occurrence, in lingering labors especially, to meet with a violent gush of blood, after the establishment of parturition, and before the presenting part has passed the brim of the pelvis. Much alarm is necessarily felt of course, for the safe issue of such a case, and the first duty of the accoucher is to ascertain the character of the presentation. If it be the proper presentation of the head, or breech, and there is reason to suppose the contractile energies of the womb can be called into action, we may safely leave the presentation as it is, and rely on the efforts of nature. But if the hemorrhage be profuse, the pains sluggish, and all the rational means of rousing the uterus to action have failed,

the resort to instrumental delivery is pardonable. In order however to avoid such a resort the womb must be firmly grasped at the fundus, and that process, called more elegantly than truly, shampooing, should be adopted with considerable energy. This plan does not often fail, though it has in some instances in our hands, and in that case, we have found the ergot a valuable agent. We submit the following case in illustration of its power, and several of an analogous character, have almost justified the anticipations of Dr. Davis, the eminent author on Obstetrical Science, who expressed a hope that we should find in this excitant, a substitute for instruments.

Mrs. K———, of this city, was, in 1834 seized with the pains of labor at the full period. They continued some hours before the presenting part was brought within the range of the finger, and when ascertained, was found to be the head. The uterine energy was very feeble, and the progress of the head, through the brim of the pelvis, scarcely perceptible. At this stage of the labor, a profuse, inundating hemorrhage presented itself, to arrest which the ergot was administered, in order to bring on energetic contraction of the womb. In twenty minutes, after its exhibition, delivery was effected, the hemorrhage ceased altogether, and both mother and child got through safely.

We shall not advocate in any case, a loose and careless administration of this article. There is too much at stake, for the exhibition of blind devotion to any hobby, and in cases of this nature, the accoucher, must remember, that he may make an impacted affair of the fœtus by the ergot, and then instead of the single danger of hemorrhage, he would amplify his materials for trouble very greatly—it may become hemorrhage, an impacted fœtus, and ruptured uterus, in a very short time. The use of the ergot therefore, when the head rests above the brim of the pelvis, can scarcely be too cautiously exercised, though no valid objection can be presented against its administration, when the presenting part is low down in the pelvis, the soft parts dilatable, and the uterine action feeble. If hemorrhage occurs under such circumstances, the ergot

should be promptly exhibited, and it rarely fails in exerting its powers. In the event of failure, we have no resource, but to either turn and deliver, or resort to the evacuation of the womb, by instruments.

Upon the last branch of Uterine Hemorrhage, proposed for remark—flooding after delivery, we shall not at this time add to the remarks made on page 58 of the present number of the "Journal." From not a very limited experience we are confident that the views there given, will, to borrow the language of a distinguished writer, "stand the test of time, scrutiny and talents."

PARTURIENT CONVULSIONS.

This very formidable accompaniment of the gestative state, demands a great deal more investigation than we have space for in the conclusion of this paper. Involving many perplexities in tracing with accuracy the cause or complication of causes in action to produce convulsions in each particular case, these again frequently mixed, if the expression is allowable, in such a manner as to throw out false signals of distress, thus leading the mind astray in relation to the cause to be removed, and in the selection of therapeutic agents; and again, the contrariety of observation among eminent practitioners, in reference both to the pathology and treatment, renders an appropriate elucidation of the subject, a matter of difficulty. But with an anxious desire, at least to make the attempt, at clearing away some of the difficulties, and a determination to keep up a rigid examination of each step of the inquiry, we hope "to deserve success, if we may not command it."

Let us at once enter upon the subject. What are the causes productive of these convulsive affections? They may be generalized as uterine, and intestinal, each operating singly in some cases, and in others, a combination of both being requisite. It is necessary for us to know the cause or causes in each case, if the knowledge can be gained, and our prescriptions should be made in the blaze of a meridian light upon

the subject, if we would act wisely, and the more we know of the causes, capable of producing convulsions, the better judgment shall we form as to those in operation.

In proof then of the power of uterine irritation, to produce convulsions, we have only to refer the reader to certain uterine disorders, connected with the menstrual evacuation. In these affections, we have seen severe convulsions, and have relieved them, without directing any attention to the intestinal system. Again, the fact that almost every variety of convulsive affection, apoplectic, tetanic, epileptic, cataleptic, and the lighter shades of cerebral disorder, such as subsultus, tendinum, tinnitus aurium, mental alienation, vertigo, et cet. accompany the developement of the genital organs, at puberty. If that stage of life is passed properly in the healthy establishment of the uterine functions, these convulsive phenomena cease, if the disorder continues, the cerebral derangement remains in most cases. And we are prepared to admit that the long continued pressure of the gravid uterus, upon the great trunks of the vascular system, and upon the important abdominal viscera, is sufficient to give rise to a train of morbid phenomena, that not only may, but frequently do end in the establishment of convulsions. These are facts too well known to require proof, and are referable to that state of things described by French pathologists as intestinal irritation, reflected upon the brain. That these affections, are often exclusively connected with disorder of the alimentary canal, is abundantly proved by the fact, that relief follows the simple action of an enema in unloading the large intestines, and that visceral derangement is the sole cause in many cases, is very evident from the consideration that all other means for relief fail, except those which successfully reform the disorder of the viscera. Hence the necessity of the use of discriminating perceptions in regard to the cause in each case, for direful are the effects of that routine practice, that knows but one remedy for all these cases. Hades will catch many, that lean on it for succor.

But we must farther consider, that uterine irritation in its simple character, is not always sufficient to account for these

convulsions, for they sometimes occur only during labor, when irritation is in motion, that is, each uterine pain, is accompanied with a convulsive fit. This can occasion no surprise, if we mark the violent throbbing of the carotids, the temporal arteries, the spinning of the eyes, and flush of the cheeks, present during an agonizing pain. The throes of the muscles are violent in many cases, and are certainly capable of determining a great amount of irritation to the brain.

To return to the abdominal apparatus, we must remember that indigestible substances taken into the stomach, may induce an attack of parturient convulsions, either by their action upon the stomach, or small intestines. The most formidable attack we have known, was the effect of the pulp of the water-melon taken into the stomach. Again, the gestative process, being favorable to fecal accumulations in the large intestines, indeed to such an extent sometimes, as to be demonstrated by an abdominal survey, we are prepared to estimate this as one of the productive causes of parturient convulsions. There is another condition of things, differing materially from any we have mentioned, which frequently produces this affection—we allude to exhaustion, a nervous temperament, or local injury. Each of these may be known, by an absence of those signs of congestion, plethora, and active determination to the brain which usually characterize the other species. The attack is usually preceded by a sense of fainting or lassitude, the eyes and face unsuffused, but wildness of expression in them—"the pulse small, hard or constricted, the urine copious and pale, and the agitations and tossings of the limbs *greater*, but attended with less force or rigidity, than the mixed and apoplectic forms." This form is not attended with those sequelæ, left by the more congestive attacks.

Having thus brought forward the leading causes, which induce an attack of parturient convulsions, our next step is to know the characteristics most certain to be present. And what are they? The answer must be general in its nature, because there are exceptions, and this fact must be remembered in our cautionary prognosis. As a general rule then it

may be observed, that these convulsions almost uniformly attack "strong plethoric young women with short thick necks, in their first pregnancies." And if we were only gifted with the faculty of prescience, in order to ascertain the nature of the presentation, we might reasonably hope, if it were a preternatural presentation, that our patient would escape the convulsive seizure. But we cannot learn this fact early enough in common, to apply the soothing unction derived from it.

Ramsbotham, says in relation to the greater liability of first pregnancies, to take on this form of disease, "nor is an attack confined to a first pregnancy, *women with large families are equally, or perhaps more liable to be assailed.*" This last clause appears to be an unguarded statement, and is opposed not only by the experience of other observers, but by his own cases so far as he speaks. Dr. Collins says, "of nineteen cases recorded by Dr. Joseph Clarke, sixteen were *first* children. Of thirty-six by Dr. Merriman, twenty-eight were *first* children. Of thirty by myself, twenty-nine were *first* children. Thus of the eighty-five cases, seventy-three were first pregnancies." Of twenty-one cases recorded by Dr. Ramsbotham, in which reference is made to this point, only two cases are mentioned where they were not first pregnancies, except when the children were born prematurely at the sixth or seventh month." It is therefore evident, that in a great majority of cases, convulsions are most apt to present themselves in first pregnancies, and that though not confined enough to them to make us entirely easy in regard to subsequent gestations, yet enough so, to hold out a prospect of escape. The occurrence however is sufficiently frequent, to keep a prudent and sagacious accoucher at his vigils, quite often enough to make him take timely measures by precautionary treatment, to guard a proper temperament against an attack. This would be the course of true wisdom, to which however we shall again recur, in a more appropriate place. We turn to the consideration of a full length portrait of the convulsions.

Premonitory Symptoms.—Unfortunately there is no premonition decided enough to produce more than a suspi-

cion, a mere awakening of the mind to the possible contingency. Ramsbotham says,

"The attack of the paroxysm is sometimes preceded by symptoms of cerebral disorder; the woman complaining of pain, or of a sense of weight in the head; of giddiness; of ringing in the ears; of the appearance of flashes before the eyes, or of partial defect in vision. At other times, and perhaps more frequently, these premonitory indications are absent; the paroxysm comes on instantaneously without any previous warning; the woman merely giving a shriek, or uttering some vehement exclamation immediately before the seizure. But whether there may have been antecedent forebodings of the attack, or whether it may have occurred without previous notice, the subsequent appearances and symptoms exhibit considerable similarity and uniformity."

Osiander states that "he has seldom observed a tumid state of the face and hands *wanting* as a premonitory symptom."

Complete Seizure.—We quote from Ramsbotham,

"The woman instantly becomes unconscious of any impression from surrounding objects; and, if she should happen to be at the moment in an erect, or in a sitting posture, she falls to the ground in a state of total insensibility. The different muscles assume a state of irregular contraction, so that the trunk and extremities are violently and involuntarily agitated. The countenance becomes dreadfully contorted; the face appears swollen, with a flushed or livid hue; the eyes start in their sockets, and, although usually wide open, seem devoid of perception; the eye-balls are occasionally inverted, to that extent indeed that little more than the white of the eye is visible; and by their involuntary motion exhibit a hideous aspect. The mouth is sometimes open; more frequently the jaws are so completely closed, that the teeth are with difficulty separated; the tongue is occasionally caught between the teeth, and is sometimes miserably lacerated. The act of respiration is irregular. At one time, it is almost suspended; at another, it is resumed under considerable heaving of the chest, and at each expiration, a frothy mucus is ejected from the mouth, with a hissing or rattling noise. If the tongue be wounded, that mucus is mixed with more or less blood, the appearance of which excites increased anxiety in the attendants. The heart throbs, and seems to be une-

qual to the performance of its usual functions; the pulsation of the carotids becomes visible and violent; the superficial veins of the neck and temples are unusually distended; and the pulse at the wrist, for a time at least, beats full and slow.

The above terrific appearances are not of long duration; and it is some consolation to know, that the patient is not conscious of suffering. After the lapse of a minute or two, the irregular movements of the trunk and extremities gradually subside, and are by and by suspended altogether; the countenance assumes a more natural and placid aspect; the eye-lids close; respiration becomes more regular; the balance of the vascular circulation is in some degree restored; and a truce, (from the foregoing frightful symptoms at least,) is for a time obtained, by their spontaneous cessation. But this favorable state is not destined to be of long duration. A repetition of the phenomena, only variable as to the time of return in different cases, again occurs in a similar paroxysm, and probably with increased violence. After this has exhausted itself, an interval of relief once more ensues. Another paroxysm succeeds at about an equal distance of time, which is followed by another truce. Thus do paroxysms and intervals alternate at nearly regular periods, until permanent relief is procured by means of art, or until the powers of the system are worn out by the numerous repetitions."

To this it may be added, "that, upon the accession of puerperal convulsions, a flow of blood takes place to the head and superior extremities; the veins of the lower limbs becoming proportionally empty, and the pulsation of their arteries being comparatively weak and small," a fact of great practical value.

The state of the patient during the interval is by no means uniform. Sometimes there is a partial return of sensibility, without any consciousness of the recent scene. There is a species of fatuity or vacancy in the expression of the countenance. Again, the insensibility is of a camatose character, "or of apoplectic stertor, with dilated or contracted pupils." In either event, the return of the paroxysms may be expected, unless energetic and appropriate measures of relief shall accomplish their object.

Standing then in the presence of this caravan of terrific symptoms, trooping it over the "human form divine," what

is the first great duty of the accoucher? He has now, no ordinary responsibility resting on his head, for it devolves upon him to some extent to decide the issues of life or death. A single tripping of his reasoning powers, may make a fatal termination of the most promising case, and he should therefore be not only master of the whole subject of parturient convulsions, but of that, which is of equal moment—master of himself. The precise character of the cause or causes, the relative agency of a mixture of causes, the point from which the greatest influence is radiated, and the exact relation of cause and effect in the case must be determined accurately, before any philosophic treatment can be adopted. The investigation should therefore be of the most rigid and comprehensive character, as measures adopted with caution, are likely to be pursued with firmness. With these views before us, let us turn our attention to the treatment of,

CONVULSIONS PREVIOUS TO LABOR.

If there be a stage of premonition, our active attention must first be directed to a prevention of the complete seizure, and upon finding the symptoms laid down as indicative of an approaching convulsion, especially in connection with "a coarse make, strong plethoric habit, short thick neck, and first pregnancy," with such precursors, we repeat, it is both lawful and proper to take seasonable measures for warding off the full developement of the convulsions. The course to be pursued, is plain and simple—bleeding from a large orifice, if the state of the patient calls for the abstraction of blood, to an extent sufficient to diminish the action of the heart, the free circulation of fresh air, the bowels and urinary bladder regularly evacuated, the head made and kept cool, the feet warm and comfortable, will in most cases be found sufficient, to stop the symptoms at the premonitory stage. After that point is obtained, the patient should take proper exercise, use a nutricious diet easily digested, avoid all causes of excitement, and regulate the secretions of the alimentary canal and

urinary bladder. By this course steadily pursued, the complete seizure may be prevented.

But we turn our attention to the more important consideration of the means to be adopted for arresting the actual convulsion.

If the condition of the encephalon, be such as to indicate, that it is playing an important part in the attack, this state of things being known by the increased throbbing of the carotids, the flushed countenance, increased force and frequency of the pulse, there can be no doubt of the propriety of the use of the lancet. Again, if the skin be dry and harsh, the pulse oppressed as if carrying a load, venesection is still the best remedy, and indeed in all cases, not altogether the result of exhaustion, a nervous temperament or local injury. We give way however to Ramsbotham, and quote him fully on the subject, without however endorsing all the opinions:

"At the very onset of a convulsive attack, or with as little delay as possible, an attempt should be made to check its recurrence by a free and copious loss of blood. Let the patient lose from the arm, and from a very free orifice, twenty, twenty-four, or thirty ounces of blood at once; keeping in mind, that the quantity to be taken away must bear a relative proportion to the presumed ability of the woman to sustain the loss. It is, perhaps, impossible to fix the precise and definite proportion of blood which ought to be taken away in every case; yet it ought always to be to that extent, as to make an obvious impression upon the general circulation. To produce that effect, a less quantity than that first named will seldom suffice; most women bear it not only without inconvenience, but with evident advantage.

I beg here, however, to offer one caution, (which is intended for those members of the profession who have not seen much practice,) to look to the mode in which the blood flows. If it should not escape freely, and in a full current from the orifice; if it merely trickle down the arm, the operation has failed, and any expectation of benefit therefrom will be disappointed. Even should the current be free, and the orifice scanty, little good can be expected to follow. Under such circumstances, since the chance of relief is entirely dependent upon the sudden abstraction of blood, another vein

should be immediately, and effectually opened in a fresh part. Should this act be omitted, it would perhaps have fared better with the patient, that the operation should have been entirely withheld, than thus fruitlessly attempted.

Considerable difficulties are sometimes met with in the performance of the operation. Exclusive of the uncertainty of meeting with a proper vein, the surgeon has to contend with that involuntary restlessness, and insensibility which is inseparable from the paroxysm. But a knowledge of that fact ought only to excite an increased degree of care in the management of the lancet. If the veins in the arm should not offer the prospect of a quick abstraction of blood, some superficial artery, the temporal, for instance, may be opened at once. Indeed I see little objection to the occasional performance of the latter operation in aid of the former, except in its not being so common.

Having satisfactorily obtained a sufficient quantity of blood, the free evacuation of the intestinal canal must be the next object of attention. A full dose of calomel, ten to fifteen grains, may be immediately exhibited, and followed by saline or drastic purgatives. But if a state of stupor and insensibility should prevail during the intervals, it will be totally impracticable to get down any efficient quantity of opening medicine. The calomel, mixed with a proper proportion of sugar may then be placed upon the tongue, running the chance of its reaching the stomach; the occasional injection of purgative clysters may also be had recourse to. Croton oil may possibly prove a ready and useful purgative; but of its effects, I cannot speak from personal experience.

It will presently be perceptible, whether the means abovementioned have produced any beneficial effect, either in prolonging the interval; in the mitigation of any of the symptoms; or in the prevention of a return. Should they fail in these desirable objects, blood-letting must be repeated in a similar or smaller quantity, as the strength of the patient may seem able to bear. A third, or even a fourth bleeding may become necessary; for in these cases, a larger quantity of blood may be abstracted, not only with safety, and with less present or future inconvenience; but also with greater subsequent advantage, than in most other complaints.

But it must be evident, that the abstraction of blood should be confined within some bounds. If after the loss of fifty or sixty ounces of blood, no impression should be made upon the strength or duration of the paroxysms, a repetition of the operation, at the present at least, cannot be permitted.

We generally find, however, that after pursuing this active practice, the paroxysms become less violent; and that by and by, they entirely subside. The woman afterwards gets some sleep, from which she awakes considerably refreshed. Yet, she generally shows some confusion of mind; complains of pain in her head; has a vacant stare of eye; and makes a variety of enquiries respecting the past scenes.

When the result proves thus satisfactory, the convulsions seldom return; but the woman rarely completes her full period of gestation."

We are far from advocating such profuse bleeding in these cases, and believe a seasonable resort to other measures, cannot fail to render such large abstractions of blood unnecessary. To these measures we now ask the attention of the reader.

The first remedial agent, in all such cases, should be a free ventillation of the apartment with fresh and cool air. It is one of the best restoratives in the kingdom of nature, and by its influence upon the respiratory apparatus, gives relief of a marked character. The cold dash, made by pouring water from some little height, in a small stream upon the head, and repeated as often as the symptoms warrant, is another very effectual agent in controlling the convulsive affection. If to these be added active purgatives, that will speedily empty the intestinal canal, the spasms will soon be curbed in most cases. We premise that the lancet has been already used at least once. But if all these fail, and there should be a speedy recurrence, we must *increase* our efforts, for it should never be forgotten, *that each return of the convulsion, diminishes the chance of recovery.* Copland recommends an activity of depletion that cannot fail often to command success in those forms of the disease which "assume the characteristics of eclampsia, or which are attended with fulness about the head, or stertorous breathing." When these symptoms are present, the case will bear depletion better than other forms of the seizure. In violent cases, we should resort to venesection, the orifice should be made large, and the blood drawn in a full stream, at the same time the full and free application of the cold dash, should be attended to, and if to these be added, an enema of

turpentine thrown well up the bowels, we may rely upon commanding the paroxysm. Under this form of treatment, the employment of cold water to the head, venesection, enemata of turpentine,* combined with assafœtida, Copland says, "the results have been most satisfactory," and he is well enough known to be relied upon. It is the treatment pursued by the writer of this review in similar affections, and was adopted originally from principle, and the confirmation of its sanative influence by such a practitioner as Copland is highly estimated. We subjoin a case from Copland. It is an interesting one, being confirmatory of the value of these therapeutic agents. He says: "In all cases occurring previously to, during or after parturition, *the state of the bladder*, and of the bowels ought to be carefully enquired into. Early in 1823, I was called to the Queen's Lying-in Hospital, by the house pupil, to a patient who had been seized with puerperal fever on the second day after delivery but was convalescent from it, when she was attacked with convulsions, brought on by distended urinary bladder. I found that the urine had been drawn off, and she had been blooded once largely. The case was one of extreme severity and danger, the convulsions were unremitting, and attended with profound coma and asphyxy. The vein was re-opened, and while the blood flowed, a stream of cold water was kept playing on the vertex, and at the same time a clyster of turpentine and camphor was thrown up. Thus the three most powerful—the almost only, remedies to be confided in were simultaneously in operation. The patient rapidly recovered. Purgatives were given by the mouth, upon the solution of the convulsions; deglutition having been entirely abolished during

* Note. In the use of enemata in these cases, we should resort to those means which command the intestinal canal most perfectly. For several years, we have been in the habit of using a force pump, with a gum elastic tube attached to it, which being passed up as far as the valve of the colon, exerts a powerful influence. By this means a large quantity of fluid may be thrown up the bowels, without the irritation given by frequent introductions of the instrument. Half a gallon of water, with two ounces of Lac. Assafœtida and an equal quantity of spts. Turpentine, makes an excellent enema for these cases, dependant on intestinal irritation.

the whole seizure. This was one of the earliest cases in which I had ventured upon the *simultaneous* employment of these powerful agents, the use of them in succession having been generally adopted by me previously. I allude to this case more particularly, because of its uncommon severity; of its occurrence soon after a most dangerous disease, as late as nine days after delivery."

It is the duty of the practitioner, to take full advantage of all the observations, made by those whose experience is to be depended upon. We call up now in its proper place, a remark we have already quoted—the retreat of the vascular fluids from the lower extremities, in these severe forms of convulsion dependent on the increased vascularity of the brain. While therefore, we are pursuing the active measures already referred to, we should not neglect the application of sinapisms to the feet and legs, and we know of nothing equal to dry mustard, sprinkled freely upon the inside of thick woolen stockings, and applied to the limbs, after being well chafed with the hands. The state of the skin, must determine in the mind of the practitioner, whether the warm bath may be advantageously used or not. Its powerful qualities in all cases, of an appropriate character for its use, renders it too important an agent to be neglected. We have seen the most marked benefit derived from it, in a state of the skin, where the temperature is below par, and with that peculiar appearance, called "goose flesh."

Let us not be misunderstood, in our remarks upon venesection—it is very far from being our wish, to decry the *use* of the lancet—the *abuses* of that valuable remedial agent, are the subject of censure, and none can deny that great abuses do prevail in the alacrity with which it is whipped out upon all occasions, and the absence of principle that so frequently attends its application. It is the sheet anchor of safety, in all those cases demanding its use, in those that barely admit this kind of depletion, it may become the rock upon which the life of the patient may strand, and is the minister of dissolution in many cases. As these are momentous points, we shall give a more marked attention to them, and

endeavor to appeal to fact, instead of resorting to an *ipse dixit* method, of carrying propositions.

In order to determine the use and extent of venesection, it is essential, to understand that condition of the brain, which when present, causes the convulsion, which when changed, changes the character of it, and when removed, destroys the tendency to the spasm. That condition is one either of fulness or exhaustion in the general vascular system, and it is important to bear in mind, that in the greatest state of *exhaustion*, the vessels of the brain are not diminished in their quantum of blood. But yet we are safe in saying these opposite states of the system, demand a variation of treatment. Indeed, convulsions of the character we have been considering, are apt to supervene, upon that state of exhaustion brought about by excessive hemorrhage, and surely the lancet is not indicated in such a state of things as that.* The experiments of Malphigi and others, prove that convulsions may be brought on in animals by *exhausting* venesection, and this is the point to which we wish to direct the attention of the practitioner. In these cases of exhaustion, the pulse is rapid and weak, the countenance pale and exsanguinated, and therefore venesection is prohibited in all such conditions. But while we secure ourselves against the improper use of

* Blundell has recorded the observation of some facts, which occurred in a suite of experiments made on the thoracic aorta of a dog, which are too valuable to be omitted. He says: "If I bled the dog before I tied the aorta, he lived for some hours; but if I secured the artery without a previous bleeding, he had an attack of convulsions resembling very much the puerperal convulsions of women, and this attack could be relieved or renewed by opening or closing the aorta. When I opened the dog, I discovered, on the surface of the brain, a few small clots of effused blood, not much bigger than a pea. And the explanation of the phenomenon was this: when the aorta was tied, it collapsed below the ligature, and emptied itself into the *vena cava*, then the blood came in large quantities from the cava through the right side of the heart, and the lungs into the left side of the heart, and the aorta, so as to reach the ligature by which its further progress was intercepted, so that it could not make its entrance into the parts below, or behind the thorax. As in convulsions, therefore, so here the blood accumulated in the upper or anterior parts of the system, and convulsions and death were the result."

the lancet, against pushing it too far, let it not be abandoned too readily, and this error of considerable moment, which sometimes shows itself in the chamber of the patient, should be avoided with great care. A practitioner called to a formidable case of convulsions, attended with marked symptoms of cerebral fulness, and bounding hard pulse, very properly bleeds freely, and the patient is relieved. The paroxysm passes off, and partial consciousness returns, the pulse is slowly climbing up again, and all is indicative of fair weather. Happy in the possession of a remedy, which so easily prostrates a powerful antagonist, he hies away homeward, congratulating himself upon the happy issue of the case. But he is soon summoned again, and now the remedial agent is not quite so beneficial as before—the symptoms are aggravated—the powers of the system are not able to resist, as they did in the primal stage, and the patient sinks. It is the duty of the practitioner, to remain in the room, with these cases, no matter how marked the relief *immediately* after depletion may be, he has no right to claim a leave of absence, until time, confirms the assurance of the moment. If he is present, when the arterial excitement first renews its work, he may easily control it, if he is absent until the convulsive seizure is full, the patient may die.

Again, we must be guarded as to the character of the reaction which follows bleeding *ad deliquium*, because it is by no means safe to recur to the lancet in all such reactions. True, they should be watched with care, and seasonable aid should be given if necessary, but they do not demand the lancet by any means, upon all occasions.

Let us then remember, that the lancet is indicated when the pulse is hard and bounding, symptoms of cerebral fulness present, and convulsions violent, and that it cannot be resorted to with any safety, when the circulation is languid, pulse feeble and fluttering, skin shrivelled, coma profound, stertorous breathing, and cold extremities. The restoration of the circulation and temperature to the skin and extremities, are the first great indications to fulfil, and purga-

tive medicines should be given to such an extent as to keep up regular action of the bowels. Cupping in the back of the neck, is highly serviceable, and where simple exhaustion is present, opiates and cordials are strongly indicated.

These remedial measures, must be applied to each particular case with a clear and well directed judgment, for no matter how controlling the power of the remedy may be, if it be inappropriately prescribed, it must fail in its object. In the use of the lancet, the cold dash, enemas, purgatives, the hot bath, cordials or opiates, one general principle should be deeply engraven on the memory, and it is, *that but little time is given to pursue any course of treatment*, if the disease be not speedily mastered, death must triumph in the victim. At the same time that there is no species of malady, which demands the exercise of higher energies, there is none in which there is a call for a display of intellectual abilities of greater grasp. A superior intelligence should breathe through every department of duty, and it will receive its reward in fulness of success.

The last link in the treatment of this form of disease, must now be considered—We allude to the delivery of the patient. Under what circumstances are we to resort to it? If the patient be already relieved by the course we have detailed above, there can be no necessity for paying any attention to the ovum, except in those rare cases, where it simply requires to be plucked away. But we should not hesitate about the propriety of delivery, if the convulsions continue despite of the application of all other measures of relief, because they generally cease altogether after the evacuation of the womb. To this point therefore we must direct our minds, but remember, nothing of the kind is to be attempted, unless the soft parts are relaxed, and the os uteri opened sufficiently to promise success. This state of things presents itself sometimes at a very unexpected moment, for while at one examination we find all the soft parts rigid and unyielding, in twenty minutes after, the relaxation may be perfect. A similar remark was made, in discussing uterine hemorrhage. Let us then wait with patience for favoring circumstances for manual interference, and not rashly and

madly compromit the safety of the patient, by inattention to the state of the soft parts. If our minds are well balanced in relation to this, we may secure success by delay, where we may fail by indiscreet hurry.

On the subject of manual delivery, in these parturient convulsions, the judicious Ramsbotham lays down a principle which we consider fraught with danger unless curbed to its proper place, it is: "If the means advised, fail in relieving the convulsions, the fœtus must be turned and labor terminated by art, whatever be the result." The practitioner who shall make one attempt of the kind, where the relaxation has not commenced, may not only expect to be foiled, but will greatly aggravate the state of things, he is trying to remove. After making the above remark, Ramsbotham gives the proper caution—he says, "We must be satisfied, the turning and delivery can be accomplished, easily, readily, and without the infliction of injury."

But though we may not be able to effect delivery, we are not yet cut off without resource—the liquor ammii should be evacuated, and this, by inviting the parietes of the womb to contraction, may induce efficient pains, and the convulsions may be relieved by that simple operation. The exhibition of the ergot, if deglutition be possible, may secure the end in view. And in resorting to manual delivery, we should be consoled by the reflection, that the completion of gestation is a rare event, after parturient convulsions, labor generally commencing in a few days at farthest, even after the most favorable termination of the convulsions. The child is generally still-born.

In relation to the impression made upon the system by an attack of parturient convulsions, Ramsbotham says, "I have not observed that an attack of convulsions before labor, leaves any unfavorable impression upon the constitution, either by inducing a disposition to any peculiar malady or to a return of the affection at a future confinement," and this is confirmed by Collins of Dublin.

After the convulsions cease, no matter how the object has been effected, it is necessary to pay attention in a watchful manner, to the state of the bowels and bladder. The secre-

tions should be well regulated and often examined. The diet should be nutritious and digestible, and both body and mind kept quiet. If there should be erratic disorder in the cerebral functions, the head should be kept cool, by pouring small quantities of cold water upon it occasionally. By attention to these things, we shall guard against a relapse, and make the health more permanent.

In the conclusion of our remarks upon this form of convulsion, we subjoin a very interesting case, which occurred in this city, and was of the most formidable description. It is reported by my friend Wm. N. Meriwether, M. D.

CASE OF PARTURIENT CONVULSIONS.

"On the 10th day of August, 1831, about nine o'clock A. M., I was called in great haste to Mrs. C. M., of this city, aged 19 years, of stout construction, full habit, and of fine constitution. She had reached the seventh month of her first pregnancy, and had been suddenly seized with convulsions, while sitting in her chair, and had fallen on the floor. I found her lying on the bed, with general convulsions, presenting all the features of that formidable affection, known among medical men, by the name of Puerperal Convulsions, the face flushed, carotids beating furiously, violent contortions of the whole muscular system, foaming at the mouth, &c. Her husband informed me that her health had been very fine up to the attack, and she had partaken freely of rich food. Immediately prior to the seizure, she had eaten heartily of water melon.

As soon as the necessary arrangements could be made, I bled her from a large orifice, and while the blood was running, the convulsions ceased and she became conscious to some extent. Closing the orifice, after drawing a pint of blood, I determined to give an emetic in order to remove the water melon from the stomach, considering it the exciting cause of the attack. While preparing the emetic, and an enema, which I also designed giving, the convulsions returned in all their appalling terrors. Having just com-

menced my professional career in the city, I felt desirous of the benefit of a consultation in order to bring to bear on the case judiciously, the most potent remedies that experience had commended. Dr. Galt was summoned to my aid, but before his arrival the symptoms had increased in severity so greatly, that I again resorted to the lancet, and after taking ℥xvi. of blood, the spasms again ceased, but the relief of the interval was not so marked as in the preceding one—the patient could now only look vacantly, and had lost the power of speech. The pupils were dilated, and contracted very partially, under the admission of light. She had some inclination to sleep, and when asleep, the breathing was distinctly stertorous. The pulse, which at the accession was full and bounding, had not yet been materially affected by the two bleedings.

In the retirement of Dr. Galt and myself, it was determined to give some active cathartic medicine, and calomel and jalap were decided on, with the occasional use of Senna tea whenever deglutition would permit, and to administer enemata;—should the convulsions reappear, the lancet was again to be resorted to. I remained with the patient generally through the night, and at one time, bled her to the amount of two pounds about midnight. In the morning Dr. Galt called again, and found the case under the above details, with no abatement of the symptoms—the medicines and injections had not operated. In our next conversation upon the subject, Dr. Galt was somewhat opposed to the farther use of the lancet—he said however after making several valuable suggestions, that he was compelled to go into the country, and withdrew from the case to my great regret. Being still more unwilling than ever, to proceed alone, I called in Dr. Pendergrast, another patriarch of the profession. In our consultation, we thought the case a hopeless one under any treatment, but agreed to push the lancet, together with enemas, &c., as far as any hope presented itself. It was utterly impossible to administer any thing by the mouth, the convulsions and insensibility were so continuous. From the time I saw Dr. Pen-

dergrast in the morning, until just before sun down, I bled the patient to the amount of three pounds more, making in about thirty hours, seven pounds or pints. I did not measure the quantity exactly, but from close observation with others, supposed that, to be the amount. At the last bleeding, the convulsions ceased, nor did they ever again return. The mind appeared to be lighted up with its accustomed intelligence, and the patient spoke intelligibly. During all this time the bowels and bladder were unmoved—as soon as medicine could be given she took thirty grains of calomel and the same quantity of jalap, which in five or six hours purged her freely. Large, dark, consistent evacuations were obtained, together with free urinary discharge, apparently to the total relief of the patient. The next day early, she was delivered of a still-born infant, the head presenting—nothing followed of any consequence, except a very rapid and perfect recovery.

During the greater part of the time she was convulsed it required several persons to keep her on the bed, and to prevent injuries of various kinds. In endeavoring to prevent the injury of the tongue, which was but partially affected, one or two teeth were broken out by the violence of the contractions of the muscles of mastication.

In the latter bleedings, the pulse was greatly reduced in volume and rendered much quicker—she was not conscious even after her recovery, that she had been in the condition described. In three subsequent confinements, nothing unusual occurred."

We have nothing farther to say upon the subject of Parturient Convulsions previous to labor, and pass to the consideration of,

CONVULSIONS DURING LABOR.

It must not be imagined, that because a female is going through the stages of her labor in a natural and proper manner, that she is therefore exempt from an attack of convulsions. They make a very unexpected, as well as unwel-

come visit sometimes, coming with the stunning effect of a clap of thunder in a clear sky. But they usually present themselves, "under those changes which the os uteri undergoes during its dilitation, especially if they are effected in a lingering and painful manner."

"The seizure is generally unexpected and sudden; instantly exciting the greatest alarm. It happens at a time, perhaps, when the labor appears to be going on favorably, and to promise a happy termination. But this astounding occurrence at once intervenes to cloud the brightness of the prospect, and to blight all antecedent hopes. Yet sometimes, the woman previously exhibits an unusual degree of anxiety and restlessness, with a constant inclination to a change of posture; and she may even throw out an occasional expression of some foreboding mischief. The pains, generally severe for the period of the labor, are borne with great impatience; the os uteri does not give way kindly, and feels to the finger, hot and devoid of moisture. There are also redness of the face, suffusion of the eyes, and pain in the head."

The treatment of this state of things, must be regulated by the particular nature of the case, and the principles we have already laid down, may with some modifications be applied here. But on this subject, the following judicious observations must command respect. We quote from Ramsbotham:

"Upon the attack of a convulsive paroxysm under such circumstances, or indeed upon the appearance of such threatening symptoms as may warrant the practice, a quantity of blood proportionate to the strength and condition of the patient must be immediately withdrawn from the arm, and generally without reference to the stage of the labor; unless, indeed, the child should appear to be very near expulsion. It must afterwards become a matter of serious deliberation, whether the bleeding should be repeated, at what time, and to what extent; and whether the completion of the case may be safely entrusted to the natural agents; or whether a recourse should be had to mechanical means for expediting its termination.

In determining such practical questions, the length of time which has elapsed since the commencement of the labor; the effects which are already induced upon the system

by its continuance; the degree of progress it has made at the time, the state of the os uteri, vagina, and external parts; the facility or difficulty with which instrumental assistance may probably be applied; must each and all be taken into the account; and from the combined inferences thence derived, must the judgment and the conduct be at the moment regulated.

When convulsions make their appearance under the first stage of labor, before the head has got possession of the pelvis; and when, in spite of one sufficient and effective bleeding, the paroxysms are repeated with undiminished violence as well as at equal intervals, recourse must be had to a second operation without much loss of time. In case satisfactory relief is not thereby in a short time procured, we may possibly be justified in resorting to a third, and even occasionally to a fourth operation, at no long intervals, but in diminished quantity. If it should still turn out, that these repeated bleedings have made no impression upon the strength and duration of the paroxysms, this plan cannot be safely persevered in; some other must be substituted in its stead. The only expedient upon which any reliance can then be satisfactorily placed is an early delivery." Again,

"When convulsions come on in the second stage of labor, under a full dilatation of the os uteri, with a considerable advance of the head down in the pelvis, the propriety of bleeding must be regulated by the state of the patient. If the labor shall have been already long protracted; if the patient's powers be considerably diminished; it will be prudent in the first instance to have recourse to the forceps with the intention of hastening delivery: since it is probable, that the convulsions may be connected with the continuance of the labor, and with the general irritation thereby produced. Otherwise, a liberal bleeding should always precede the application of instrumental means."

It may not be irrelevant to remark, that Collins says, "in twin cases, with convulsions, *no matter what the attack may be*, the danger of a fatal termination is greatly increased." This may at least help us in forming a prognosis in such cases.

CONVULSIONS SUBSEQUENT TO DELIVERY.

We remarked, in commencing the subject of "Convulsions during labor," that they were not always dependent upon aberrations from natural and customary phenomena, in

the progress of a labor, and the same remark holds good in relation to those which present themselves after delivery. A labor may progress and terminate in almost a faultless manner, be unattended by any extraordinary effort, and still convulsions may come stalking in upon the scene, amidst the most brilliant anticipations of speedy and complete restoration. The illusions of life, are nowhere more pre-eminent than in the puerperal kingdom, and therefore we should never promise either ourselves or our patients too much.

We should reason *a priori*, that convulsions would more certainly supervene upon a lingering, painful and difficult labor, than an easy one, but let us not deceive ourselves—such is not the fact. They sometimes follow a sudden loss of blood, a fact that should be borne in mind, because of its practical bearing in following indications. The paroxysms very much resemble the other forms of Parturient Convulsions in general cheracteristics, but we must be very careful not to carry the analogy too far into the treatment. But before we reach that, we submit to the reader, the observations of Ramsbotham, on the comparative fatality of convulsions prior to, and subsequent to delivery. They are too valuable to pass in silence. He remarks:

"Upon a general average of cases, I think it will be found, that convulsions after delivery are more intractable, and prove more frequently fatal, than when they occur previous to, or during labor. I have remarked, that when they come on under either of the latter states, and *continue after delivery*, whether it may have been effected naturally, or hastened by art, they generally prove destructive to the patient. But that if they be checked by delivery, they seldom return afterwards; a quiet sleep presently succeeds, which is usually the first, and most favorable harbinger of subsequent recovery."

In regard to the treatment, we have but a few words to say. The same exercise of our reasoning and observing powers, which are important in the successful treatment of the preceding forms of this malady, are equally important for this one. If circumstances warrant the course, we should bleed freely, either from the arm, the jugular vein, or the temporal artery,

and make a decided impression. Purgatives and enemata are generally indicated, and of these remedial agents, the lancet should stop with the cessation of the convulsions, while the others should be kept in service as long as traces of disease linger about the case. We doubt the propriety of the recommendation of Ramsbotham, when he says, if the convulsions do not cease, go on to two, three or even four bleedings—Such treatment will, we are persuaded, in many cases, keep up the very state of things we are endeavoring to remove. Indeed after recommending the continuation of the blood-letting he adds,—but if no favorable symptoms ensue, *after one or two liberal bleedings*, the case seldom turns out well. Free, consistent purging, occasional enemas, attention to the skin with the hot bath, frictions, &c., after a free bleeding, followed, when the alimentary secretions are in a natural condition, by opiates given so as to determine to the skin, cooling applications cautiously applied to the head, and cordial restoratives when demanded by the symptoms, will in most cases succeed more certainly in this form of puerperal convulsions, than a ferocious use of the lancet. If salutary in a certain group of symptoms, it may prove injurious, like all powerful agents, in those cases not adapted to its employment, and the absence of one or two features of the group, may render its agency a baneful piece of business. We should not therefore lean upon it too frequently, simply because high authorities sanction its use,* and on account of its highly beneficial influence in many cases; but our duty is to trace with care, those circumstances most apt to indicate success from venesection, and separate from them, those that call for other measures. Each condition of case, will find its appropriate set of remedies in a well regulated Materia Medica, and consequently we have no apology for that loose spirit of generalization, which never appreciates variations

* We refer our readers, for some very interesting remarks on this point, to an able article in the "American Journal of Medical Sciences" No. 38, by Dr. Denny. The noble frankness and honesty displayed in that paper, together with the sound intelligence exhibited, are highly creditable to the author. We should have been thankful for a smaller share of metaphysics.

from a preconceived standard. How many philosophers of the ancient *regime* spent their lives and wasted their energies, in a chase after the butterflies of thought, and how many medical minds have wandered through the realms of error, not wasting their own lives, but the lives of their patients, in the same vain pursuit! Mr. Jefferson used to tell an anecdote of this system of generalizing, in reference to the death of a female belonging to the family of a friend of his. He was on a visit to the family, while the loss was green upon their minds, and they spoke to him of the case. After telling of her sufferings in an attack of fever, and their affliction in losing her, they consoled themselves with the reflection, that all had been done for her, that art could devise, *having been bled thirty-three times in the course of the attack.*

In summing up the whole matter, we would again entreat practitioners in undertaking the high responsibilities of these cases, to trace out clearly the most probable cause of the attack, analyze with care its bearing on the whole group of symptoms, and give each appearance its appropriate origin and influence. The next step is the selection of the agents for the removal of the disease, and the proper use of them. For success at this point, we know of nothing that demands a higher sagacity, and a greater prescience—without withdrawing our minds from the present state of the patient, we should constantly cast our thoughts in advance and be prepared for every thing that may spring up. The application of a set of remedies to a state of things, which demands quite a different set, must inevitably prove disastrous. If the accession is the result of repletion, the path is an open and clear one, and if from exhaustion, the course is equally well marked, and each demands quite a different course of travelling from the other, to attain the same great end in view. And yet how loose and undefined are the directions for the treatment of these convulsive affections, in our best medical authorities on the subject! If summoned to a patient with plethoric habit, cerebral activity, full, bounding pulse, who went into the attack with apparent good health, and great constitutional vigor, or if the patient has the accession, after

a wasting illness which has broken the energies of the system, with feeble circulation and great debility, or from violent uterine hemorrhage, the directions are still the same—we must bleed. If we ask how far the lancet shall be carried, or how much blood shall be taken, we are told in reply, "I do not know by ounces—I bleed until I abate the severity of the fits, or until I arrest their repetition."* Such are the indefinite directions of one of the most popular and influential American writers. If we pause at this, and are disposed to tremble for consequences, we are encouraged, nay, buoyed above apprehension by an aphorism of Burns—"It is better to bleed too much, than too little," an apothegm sufficiently loose and inexplicit for direful consequences. In a great majority of cases, the lancet is the great remedy, but in others, it is of no service. An elevated and comprehensive philosophy under the government of close observation and clear induction from well ascertained facts, will direct these things and regulate them properly.

The cold dash applied correctly, is a means of relief scarcely inferior to venesection, and if pursued with prudential energy and firmness, will gratify with relief of the most decided character. We know nothing equal to it in controlling a determination of blood to the head, and it should be applied as long as there is such an afflux as to indicate direct or indirect danger. Its full benefit is to be looked for, under a stream of cold water, poured from a considerable height on the vertex of the head. It must not however be continued after the pulse is weakened, and the temperature of the skin is regulated, unless they should rise—it should then be repeated.

Enemas are the remaining resource during the convulsions, and will be found of material service, if given so as to produce the desired effect—the unloading of the intestinal tube. This is best accomplished by the measures mentioned in the note at page 183 of the "Journal." In very violent cases, we are persuaded that the simultaneous employ-

* Dewees on Puerperal Convulsions.

ment of the three—venesection, the cold dash, and enemas, will be found by far the speediest, safest and most effectual remedial method that can be adopted, because by them, almost the entire system is commanded. In milder cases, less violent measures are to be preferred.

So much for the seizure—the after-treatment is very important, in order to preserve the patient from a relapse, or from the invasion of some other form of disease. The abdominal, thoracic, cerebral and pelvic sub-systems require diligent and accurate observation, for the purpose of learning what organs are disordered in their functions, and where the greatest amount of predisposition is located. For the latter, it is perhaps sufficient to advise the avoidance of the predisposing causes—but for the first, nothing short of thorough reform of the functional derangement should be considered enough. This end is to be gained by exercise, restricted diet, and regulation of the disordered secretions by the appropriate remedies. On the subject of the delivery of the patient, we have nothing to say in addition to the principles already laid down in this review.

DISEASE SIMULATING PARTURIENT CONVULSIONS.

There is a form of convulsive affection, enough like the Parturient Convulsion, to be easily mistaken for it, and unlike it to such an extent, as to require a very different suite of measures for the successful treatment. It is a species of Hysteria, presenting many of the peculiarities of the disease which we have just been considering so extensively, and the analogy between them, is so great in many cases as to require a great deal of tact and judgment in the practitioner to detect the real character of the convulsions. The remarkable propensity of Hysteria, to assume the appearance of other maladies, is familiar to all enlightened physicians, and was first forcibly described by Sydenham. He says: "This disease is not more remarkable for its frequency than for the numerous forms under which it appears, resembling most of the distempers wherewith mankind are

afflicted. For in whatever part of the body it be seated, it immediately produces such symptoms as are peculiar thereto."

We wish the diagnosis of this affection were as easy as the description, for it is all important that the practitioner shall not fall into the error of supposing Hysteria, a form of Parturient Convulsion. Treatment based upon such a mistake, would play havoc with the case. But we proceed to describe the affection, in order to elucidate the distinctions between Hysteria and Parturient Convulsions.

In Hysterical cases, there is usually a sense of oppression, which precedes the actual accession, a considerable degree of lassitude is complained of, amounting in many cases to leipothymia, the eyes have a wild expression, a stare, an irregular rolling or a sparkling appearance, being the usual order of things. The urine is copious and pale in many cases. There is a great quantity of flatus rolling about in the bowels, and during the commotion of this, there is a sudden reaching after breath, resembling in expression, the sound made by a person when a large amount of cold water is unexpectedly thrown over them. It must not however be expected that these symptoms will always be presented in this distinct form, there are cases in which the resemblance to parturient convulsions is so great, that the difficulty of distinguishing between them is very considerable.

But the surest confidence in the diagnosis, is based upon an intimate acquaintance with the various livery which Hysteria assumes, and by this, the practiced judgment may always detect the malingerer, under the folds of its most ample cloak. This state of mind however demands a familiarity with the subject, that few ever give themselves the trouble of acquiring,* and we proceed to point out some of the leading characteristics of the Hysteric convulsion.

In Hysteria the seizure is not so sudden, and the transitions from one set of symptoms to another, are generally

* There is a paper on this subject in the 134th No. of the Edinburg Med. and Surg. Journal, which will richly repay a close perusal.

more rapid, and less violent in their character, than the features of the puerperal fit—the extremities and trunk may be as violently convulsed, as in the Parturient Convulsion, but the face is not so much distorted—the eyeballs are more quiet, and there is less inequality in the number of arterial pulsations, and the acts of respiration in Hysteria—those two functions being nearly equal in number. During the fit in this form, the pulse is usually hard and contracted, in the interval, it is expanded and runs with freedom. The hysterical convulsion is not attended with so much injury to the tongue, nor is there a frothy saliva worked from the mouth. Again, the pupils are generally obedient to the action of light upon them, which is not the case in the other, and by great vigilance we may observe symptoms of stricture of the glottis, giving rise to what is known as the *globus hystericus.* This of course would be decisive. But next to this, the most decisive mark of distinction is; the hysteric patient remembers in the interval, the occurrences during the seizure, which is not the case in the Parturient Convulsions. The restoration of the intellectual powers is much greater and better defined during the interval in Hysteria than in the other.

The intelligent practitioner may by close attention, unveil the most marked forms of this very deceptive disorder, and in treating these affections, should observe one great rule—to treat Hysteria as Hysteria and Parturient Convulsions as such. Stimulating liniments rubbed over the bowels, the dash of cold water in the face, and carminative remedies, are generally equal to the removal of the Hysteric Convulsion.

We have thus closed our remarks upon the three great points mentioned in the first part of this Review—how far they are acceptable to the profession, time must determine. We are conscious that our whole endeavor has been to present the important principles involved in the investigation, in a clear and lucid manner, forgetful of every thing else but professional improvement. T. S. B.

ANALECTA.

We present our readers, a very interesting account of the proceedings of the "British Association for the advancement of Science," a body of learned and able philosophers, whose labors are already beginning to be felt in the walks of truth and philosophy. According to our recollection this is the fourth annual meeting of this Association, and though we were interested greatly in their former proceedings, the discussions of the late meeting assumed a stronger cast of practical action than any of the former ones. We commend these discussions in the strongest terms to our medical friends, for we believe they will interest every physician who has any desire to improve his profession.

British Association for the advancement of Science.

ANATOMY AND MEDICINE.

President—William Clark, M. D.

Vice-Presidents—James Carson, M. D. F. R. S., Peter Mark Roget, M. D. Sec. R. S., Robert Bickersteth, Esq., Professor R. T. Evanson, M. D. M. R. I. A.

Secretaries—James Carson, jun. M. D., J. R. W. Voss, M. D.

Committee—Neil Arnott, M. D. F. R. S., Richard Bright, M. D. F. R. S., Hugh Carlisle, M. D., James Copland, M. D. F. R. S., Professor Richard T. Evanson, M. D. M. R. I. A., Richard Formby, M. D., Augustus B. Granville, M. D. F. R. S., John Houston, M. D. M. R. I. A., James Johnson, M. D., James Macartney, M. D. F. R. S., Charles Herbert Orpen, M. D., William Henry Porter, Esq., Charles B. Williams, M. D. F. R. S., John Yellowly, M. D. F. R. S.

Dr. Roget stated that he presided on this occasion, owing to the absence of Professor Clark, whose arrival was expected.

The second report of the Sub-Committee, appointed by the Association to investigate the Motions and Sounds of the Heart, was read by Dr. Charles Williams.

Before describing their last investigations, the Committee stated that they had found frequent opportunities of confirming the conclusions of their former researches on the natural sounds of the heart; and these conclusions not having been shaken by any subsequent experiment, or well-founded objection, the Committee consider them established; viz., that the first sound of the heart is *essentially* caused by the sudden

and forcible tightening of the muscular fibres of the ventricles when they contract; and that the second sound essentially depends on the reaction of the arterial columns of blood on the semilunar valves of the arterial orifices, at the moment of the ventricular diastole. Certain other circumstances were stated, as being capable of adding to, or modifying these sounds.

The chief subjects of their present inquiry were, the unnatural, or morbid sounds, sometimes heard in the heart and arteries; and in investigating the causes of these sounds, which Laennec compared to blowing, filing, sawing, purring and cooing, or musical sounds, they sought to determine, 1st, What is the essential physical cause of these sounds; and 2d, In what manner disease can develope this physical cause—a correct answer to these inquiries would determine the value of these sounds as signs of disease.

The Committee found that they could produce precisely the same sounds in every variety, by impelling, in various modes and degrees, a current of water through India rubber tubes; and by numerous experiments, they ascertained the relations which the character of these sounds bore to the nature of the impediment, and to the force of the current. They obtained similar results on experimenting on the arteries of living animals; and discovered, that in the human subject the same sounds may be produced by simple pressure, not only in the arteries, but in the veins also. They found that the sounds heard in the neck, described by some eminent French writers under the names of "bruit de diable," and "bruit de mouche," as signs of a particular morbid condition, which requires the use of certain remedies, may be produced at will, by the pressure of the stethoscope on the jugular veins of the healthiest persons, and is therefore not necessarily a sign of disease, but has probably been accidentally caused by the same pressure in many cases in which it has been considered as a morbid sign.

The Committee conclude, in answer to the first inquiry, that a certain resistance to a moving current is the essential physical cause of all the various sounds in question, and that this resistance is generally given by some pressure on, or impediment in, the tube through which the current moves; but that sometimes the resistance is caused by a change in the direction of the current, by which it is made to impinge on the walls of the vessel which contains it.

The second inquiry the Committee think can be fully answered only by extensive clinical and pathological observation, with due regard to the previous investigations; but they

have planned some experiments, that promise to elucidate certain obscure points of the pathology and diagnosis of diseases of the heart and arteries, the knowledge of which would be of direct practical advantage. These points the Committee propose to investigate, if the Association think fit to re-appoint them to this office.

The thanks of the Section were voted to the Sub-Committee, and the members were requested to continue their labors.

Dr. Copland said, the Report stated that the heart beat after the cessation of respiration, which he believed, for the heart was the *ultima moriens.* Dr. Carlisle concurred with the Report in its general view as to the cause of the sounds of the circulation in tubes from obstruction to the course of the fluid current, but differed from them on the explanation of the systolic sound, which, in his opinion, was owing to resistance from the irregularities of the heart's surface. The heart, in these cases, was *ultima moriens,* and would act, though it contained no blood, contrary to Bichat's opinion. Dr. Granville could confirm, from his experiments with poison, chiefly prussic acid, the solitary instance adduced by Dr. Williams, of the beating of the heart on the cessation of respiration, and that it continued its action, though without blood. He found, and five other gentlemen were present timing with their watches, that in seven experiments on animals made in London, the fibres of the heart were alive after the death of the lungs (*i. e.* if life could be pronounced from dilatation and contraction)—in one case five minutes, in a second eight minutes, in a third eleven minutes; and on touching with a scalpel to a much longer period; and in this case not a drop of blood was contained in the heart. The action was not owing to blood or fluid, but was merely mechanical; and it was found, in dogs and cats destroyed by prussic acid, that, on opening the cavity of the chest and abdomen simultaneously, respiration had ceased, the lungs collapsed, but the heart beat, and the intestines acted peristaltically. The heart, as a muscle, does most certainly survive respiration, and is the *ultima moriens.*

Dr. Johnson said the Report concluded that all abnormal sounds were indicative of disease or morbid obstruction; from which he must dissent. He believed the excess of the velocity of the circulating fluid was sufficient to account for it, without the supposition of any obstruction from morbid contractions, and other impediments in the arterial tubes. He was, himself, an instance of the truth of this; for when his circulation was increased, either by excitement, food, or run-

ning, he had heard these sounds in himself, and he had equally verified it by observations on others; he could not, therefore, consider these sounds as certainly abnormal. He would ask Dr. Williams, if a trial had been made of the effect of velocity of fluids through tubes with the view of ascertaining sounds?—he would ask, if sound was produced at the extremity of the vessel, why is it not heard in the diastole of it, the blood issuing, as some say, in jets, or from reflux?—Dr. Williams stated, in answer, first, that the Committee had examined this subject physically, when they found some contraction, or obstruction, or bend, was necessary for the production of the murmur and other sounds; but that they had not entirely sifted the physiological part of the subject, though he believed that their physical labors were applicable fully to the physiological. To have sounds in currents, there must be some resistance, as friction. In the natural condition of the vessel, this increased velocity of Dr. Johnson's might create friction, from want of dilatibility causing the murmuring sounds; and he would certainly recommend Dr. Johnson and his friends not to repeat their experiments frequently—at least, on themselves. To Dr. Johnson's second question—why is there not sound in a continuous current?—it would depend on the pressure; according to its degree, so would be the sound—if considerable, the *bruit de diable*. He now wished to refer to the objections of Dr. Carlisle. In last year's Report, they attributed the essential sounds of the heart to the muscular action of the heart, not to the blood; for they found the sounds perceptible, but in a diminished degree, without blood. In answer to the question, why the sounds of the heart should differ from those of the artery, he should say, the motion of the heart was only commencing, had not yet acquired momentum, and the blood was expanded over a large surface—that the ventricle contracted towards a centre, which was the artery—and that there was very little friction on the internal surface of the heart, though he could not tell how much to attribute to the *Carneæ columnæ* alluded to by Dr. Carlisle; but if examined, they would see very little irregularity where the blood converged, the principle being towards the bottom. The blood run with a different momentum in the arteries than it did in the heart, being only about three inches in half a second, and the slightest obstruction must, therefore, oppose it, while in the heart the blood moved as the muscle of the heart contracted, and other obstructions moved. As to the character of the sounds, they resembled those of natural objects, and the natural differed from the morbid. The natural was a dumb per-

cussive sort of sound, the morbid was whizzing, giving an idea of friction—filing, sawing, rushing, and so on, which an accustomed ear could distinguish with precision—Dr. Williams replied to a question asked by Dr. Granville, that the general result of their investigations led to the conclusion that velocities of motion did not alone produce sound; there must be some obstruction, some resistance.

Mr. Brett then read a paper "On the Physical and Chemical characters of Expectoration in different Diseases of the Lungs, with some Preliminary Remarks on the Albuminous Principles existing in the Blood."

The remarks on the blood referred more particularly to a general view of the albuminous principles existing in that fluid. The simplest view which could be taken of the vital fluid, is that which refers its constitution to a mixture of fluid, or soluble, and insoluble albumen,—the one constituting what is termed the serum, the other the crassamentum, or cruor. The author of the paper then proceeded to relate the different opinions which had been published on the specific gravity of the blood, quoting the statements of Berzelius, Gmelin, Dumas, and other chemical philosophers of distinction; at the same time remarking, that all these statements did not differ materially from each other, and might be considered as depending upon the fact, that the specific gravity of the blood might differ slightly, not only in different individuals, but in the same individual at different times. He then noticed the different modifications of albumen existing in the serum, which he divided into three forms:—1st. Soluble or free albumen, capable of undergoing coagulation by heat; 2dly, Albumen in combination with a basic body, viz. soda; and, 3dly, A form of albuminous matter, which he termed the colorless self-coagulating albuminous principle.

The crassamentum, as it is commonly called, of the blood, he also considered as made up of more than one form of *solid albuminous* matter; viz. of solid albumen capable of undergoing decoloration by ablution with water, and of solid albumen incapable of being decolorated by the same process; the former being insoluble, and constituting what is commonly understood under the name of fibrin, the latter soluble in water, and frequently designated red particles of *hæmatosine*. Some remarks then followed on the microscopic examination of the blood, and on the different forms of the globules in different animals. The author then proceeded to detail the various physical characters of the expectoration in the healthy condition of the lungs, as well as in its varied morbid states. The physical characters of saliva were entered upon,

and the globluarity of its opaque portions alluded to. The physical characters of expectoration in the pituitous catarrh of Laennec were then detailed; also those of the expectoration in acute and chronic bronchitis—in hæmoptysis, or pulmonary apoplexy—in pneumonia—and lastly, in different stages of phthisis. The chemical characters of these different modifications of expectoration were then fully treated of, and reference made to a tabular arrangement which the author had embodied in his papers, exhibiting the action of certain re-agents—first, on saliva, and then on the different forms of sputa, the physical characters of which had been already fully noticed. It was remarked, that saliva did not contain any soluble albumen capable of undergoing coagulation by heat; neither did it contain any solid albuminous matter, the main bulk of the solid contents of that secretion being mucous. The mode of analysis adopted, was, to deject saliva in cold water, and then subject the filtered fluid to the action of certain re-agents; another portion of saliva was then dissolved in a caustic alkali, and the alkaline solution subjected to the agency of certain tests. The quantity of solid matter in a given weight of saliva was also announced, as well as the saline matters, and their chemical nature stated: different authorities bearing on the subject were quoted, especially the statements of Berzelius and L. Gmelin. The chemical characters of expectoration in pituitous catarrh were then described, and a mode of analysis was stated to have been adopted, analogous to that employed in the case of saliva: this modification of sputum was regarded as purely mucous, possessing no albuminous matter; it was found to contain a very small proportion of solid matter in a given weight, but the quantity of saline matter was found to be considerable, when compared with the quantity of solid matter; and this saline matter the author's experiments lead him to conclude was diminished in quantity as the disease progressed. The chemical nature of sputum of the acute and chronic bronchitic character was then entered upon, and noticed as differing in certain respects from the preceding form of expectorated matter, in containing, for example, a much larger proportion of solid matter in a given weight than was found in simple pituitous expectoration, and generally a smaller proportion of saline matter; it also differed in containing, generally speaking, small quantities of soluble albumen capable of undergoing coagulation by heat.

Pneumonic expectoration was then treated of, and noticed as principally made up of a tough mucoid secretion intermixed with blood, to which last was owing its peculiar rust

or brick-red color, and also its powers of undergoing, to a certain extent, coagulation by heat when mixed with water and filtered; it was also found to differ from most other forms of expectorated matter, in containing no inconsiderable quantity of oxide of iron, derivable from the blood with which it is impregnated. Phthisical expectoration was the last form of sputum, the chemical characters of which were described. It was noticed as differing materially in different stages of the disease—in the earlier and middle stages scarcely not at all—for the most part, at least, differing from the expectoration met with in chronic or acute bronchitic affections: in the latter stages, however, not unfrequently possessing the characters of a simple collection of puriform matter, containing very large quantities both of soluble, and solid or insoluble albumen, much solid matter also in a given weight, with the ordinary saline matters found in other varieties of sputa, superadded to which was a notable proportion of oxide of iron. It was stated, that in no disease, except phthisis, did the expectoration contain so much soluble albumen capable of undergoing coagulation by heat; and also in no disease, except pneumonia, was there so large a proportion of solid matter in a given weight of the expectoration: this observation referring however to the sputum in the latter stages of phthisis, where it puts on the character of a collection of puriform matter. Allusion was then made to the fatty matter existing in expectorated fluids, which was found to be the same in quality in almost every variety of sputum, but differing in quantity, being much greater in quantity in well-marked phthisical expectoration, than in any other variety. The fatty matter was peculiar, too, from the high temperature which it required for its fusion, it being considerably higher than that necessary for the fusion of the more ordinary forms of fatty matter, and even higher than that required for cholesterine: this fatty matter was soluble in alcohol and ether, being deposited from the former when its boiling solution cooled. The author also referred to the power which a galvanic current, even of low intensity, possessed of coagulating the aqueous fluid, obtained either by digesting saliva, or any of the modifications of expectorated matter before alluded to, in water, and filtering the fluid. This coagulation was not regarded by the author as proving the presence of albumen, because, in cases in which the galvanic current effected the change in question, the most delicate re-agents with which chemists are acquainted for the detection of albumen, failed to detect the slightest trace. The author then detailed his experiments on crude and softened tuberculous matter; he

submitted the former to the action of the same re-agents as he employed to re-act upon ordinary fibrin, and was led to conclude that the crude tubercle did not differ chemically from solid albumen or fibrinous matters. The mode of analysis employed in examining the crude and softened tubercle was the following—it may be observed, that the crude tubercle was examined side by side with the ordinary fibrin: the crude tubercle was dissolved in a weak solution of caustic potass; a similar solution of fibrinous matter was obtained, and both submitted to the action of the same re-agents, with results as nearly similar as possible. The agents employed were the mineral acids, acetic acid, and ferrocyanide of potassium, tinct. galls, corrosive sublimate, &c. The softened tuberculous matter was first dejected in water, and then filtered; the filtered fluid, when submitted to re-agents, was found to contain soluble albumen,—that portion of the tubercle insoluble in water, was dejected in a weak alkaline fluid, by which a solution was obtained. This alkaline solution, when submitted to the necessary re-agents, indicated the existence of solid albuminous matter or fibrin; hence, the softened tubercle was regarded as analogous in its chemical characters to purulent matter. Experiments were then made on the tuberculous matter which had undergone perfect softening, and the result was, that the latter was chemically identical with pus; from which it was deduced, that fibrinous matter was, by a process of softening or fluifaction, converted into actual pus, and hence a fruitful source of the abundantly albuminous fluid found in the expectoration of patients in the latter stage of phthisical disease. The author then concluded his paper, by stating the results of a quantitative analysis of the expectoration of a marked puriform character, obtained from a patient in the last stage of phthisis. It was found to consist of: water—albuminous matter, with a little mucous—extractives, soluble in alcohol; ditto, soluble in water; fatty matter—saline matters, consisting of the alkaline chlorides, phosphates and carbonates, with earthy phosphates and oxide of iron.

Dr. Williams expressed his gratification that the labors of so expert a chemist had been directed to so important a branch of science as animal chemistry, which had been strangely neglected and almost overlooked. This he lamented the more, since the subject would promote both the theory and practice of medicine. He would, however, ask Mr. Brett if he had observed in his microscopical experiments in early phthisis, what the French had detected in the sputa, a sort of downy substance, peculiar to the very early stages of

this disease, and only observable through the miscroscope—indeed it was a microscopic phenomenon. It was a novelty to him, that tubercles by softening, as mentioned by Mr. Brett, assumed globular forms of which they were devoid at the commencement; a fact confirmed by Gmelin. This paper pleased him, for it further assured him of the truth he had taught, that softening was a modification of suppuration,—a conversion of albumen into pus. There was a total absence of organization in tubercle. Mr. Brett had not observed the microscopical flocculent and woolly appearance, for his attention had not been so directed. Dr. Williams explained, that it did not resemble flocculi, but was, he considered, a microscopical appearance only. Mr. Brett had made his microscopical observations on what was obvious to the naked eye, and opaque portions of these secretions he found to be globular, not so perfect in cheesy suppurations as in those of other characters. Mr. Williams inquired what was the opaque compound in saliva. Mr. Brett answered, it might be a modification of albumen, but he could not say exactly. Dr. Roget remarked, that the paper made it appear that the formation of globular inexpectorated matter was spontaneous. Dr. Williams stated, that the belief of this sort of globular formation might be supported by the circumstance of its production in serum, after it had been some time at rest, which had been shown by Dumas and Sir Everard Home. Mr. Brett did not consider the cases parallel, since serum was highly albuminous, and this expectoration not. Dr. Johnson thought, that independently of the chemical acumen, the paper would be of value to practitioners, on account of the physical character of expectorated matter, of which there were three modifications:—1st. Mucus, from intensity of disease in the bronchia. 2d. Tuberculous matter softened down, and escaping into the bronchial tubes, or entirely discharging from them. 3d. Secretion of purulent matter from excavated surfaces, scarcely distinguishable from the matter of abscess, or the after discharge from the depot, by which he meant the matter secreted after the first contents of an abscess had been discharged. Mr. Golding Bird, after alluding to Mr. Brett's experiments, and drawing the attention of the Section to those parts which particularly merited the attention of practitioners, offered a suggestion, in explanation of the circumstances mentioned by Mr. Brett, in which mucus, previously limpid, became opaque and deposited globular masses of albumen, after a few hours' exposure to the air; as well as of the fact alluded to by Dr. Williams, viz. the circumstance of serum of blood becoming opaque and depositing globules by expo-

sure. The rationale of these two facts Mr. Bird conceived might depend upon the action of carbonic acid upon albumen, and upon alkaline albuminates, first pointed out by him in a series of papers published in the *Philosophical Magazine*. In the case of mucus, he believed that a notable portion of albumen was present, held in solution by carbonic acid, and that, by exposure to air or to an atmosphere of hydrogen, this solvent was abstracted in an exceedingly gradual manner, in consequence of which, albumen was deposited in the form of rounded particles. In the case of serum, the converse Mr. Bird believed to take place; for, as Mr. Brett has shown, in his paper, this fluid to contain, independent of free albumen, a small portion of albuminate of soda, it appeared reasonable to suppose, that the carbonic acid present in the atmosphere acted on, and decomposed this compound, forming carbonate of soda, and causing the deposition of albumen in a globular form. This hypothesis, moreover, serves to explain the fact of serum, previously neutral, becoming alkaline after a few hours' exposure, for the albuminate of soda previously existing, is without action on test papers, whilst the carbonate of soda, produced in the manner above mentioned, is fully capable of producing alkaline effect on turmeric paper. This explanation is in direct accordance with the experiments related in the *Philosophical Magazine*, before alluded to.—*Eclectic Journal of Medicine.*

We give place to the first of a course of clinical lectures, delivered by Dr. Graves in the Dublin Hospital, and intend to continue enriching our eclectic department by publishing the whole of them. The fact that these lectures have received a place in the most of our cotemporaries, is sufficient evidence of the high estimation in which they are held, while, at the same time, it is indicative of a healthier and improved condition of the profession. The time was when the medical appetite craved speculation or system-building, and turned with loathing from *facts*—when physicians would rather be amused with ingenious conceits than incur the trouble of observing for themselves, or appropriating, by close study, the solid treasures collected by the industry of others. But that time has passed, it may be hoped never more to return; Med-

icine has been wrested from the dominion of the imagination, and placed under the guidance of judgment, exercised according to the strict principles of philosophyzing. It is worthy of remark, too, that *Hospitals* were the starting points of this revolution in medicine; from them was emitted the light which scattered the mists of hypothesis, and to them must we still look, in a great measure, for the additional investigations, which are needed to give to our art the precision and certainty, of which it is susceptible. We hope our own Hospital, under its improved administration, will become tributary to the interest of medicine and hereafter of our Journal; in the mean while we commend the lectures of Dr. Graves to our readers, confident that they will richly repay an attentive perusal.

Case of chronic cough—Remarks on bronchial secretion—Expectoration never performed during sleep—Effects of catarrhal attacks frequently recurring—Account of remedies employed—Great power of nitrate of potash, combined with tartar emetic, in subduing inflammation—Observations on the secretion of air from the mucous membrane of the intestines in certain pulmonary affections—Efficacy of sulphur in chronic bronchitis—Sensation of tickling which precedes cough—Cough from worms—Hysteric cough—Pulmonary irritation from a syphilitic taint—Pulmonary irritation connected with a gouty diathesis; with a scorbutic habit; with scrofula.

Allow me to direct your attention to-day to the case of J. Jowson in the chronic ward, laboring under an attack of exasperated chronic bronchitis—a disease which derives its chief importance from the circumstance of being exceedingly common. There is no morbid affection of the system more frequent or more general than chronic bronchitis; it is of everyday occurrence in dispensary practice; it is one of those cases which you will be constantly called on to treat; and hence the study of its nature and treatment has strong claims on your attention.

This man is, as you have seen, about the middle age in point of years, but he is old in constitution. In this country you will find most of the laboring poor exhibiting symptoms of premature old age—the combined result of poverty, intemperance, and hardship. Obliged to work in the open air in

bad weather, they get catarrhal affections, which are renewed by repeated exposure, and prolonged for want of proper care. The natural effect of cold frequently renewed and generally neglected is, that a tendency is produced in the bronchial mucous membrane to become congested and inflamed with facility, until at length the derangement becomes permanent, and the mucous membrane no longer returns to its normal and healthy condition during the intervals.

The secretion of the mucous membrane of the bronchial tubes, in a perfectly healthy person, is almost entirely destitute of matter to be expectorated. In the normal state, the secretion of the bronchial mucous membrane, though continually going on, scarcely ever exists in superfluous quantity, for a certain portion of it is carried off by exhalation or absorption; *a perfectly healthy person, breathing a pure air, has no expectoration whatsoever.* The moisture secreted by his bronchial mucous membrane contains nothing that the expired air cannot carry away in vapour, without leaving any residuum which, gradually accumulating, would at length require to be expectorated. In this respect the bronchial mucus in the healthy state differs from the mucus of other membranes of the same class; but disease destroys this beautiful provision, and gives rise to a secretion of morbid mucus which cannot be gotten rid of in the usual way, and which must therefore be expectorated. Hence it is that persons, in whom a chronic state of congestion of the bronchial membrane has been generated by repeated colds, have a secretion of superfluous matter always going on, and are constantly expectorating. This may continue for several years without much inconvenience; the principal annoyance the patient suffers is in getting up the phlegm in the morning. At this period there is always an accumulation of fluid in the lungs after the night, during which the cough is less frequent, and expectoration less copious.

Here let me remark, that, although a person may cough violently during his sleep, he never expectorates. Expectoration is accomplished by the attention being directed to the chest, by an act of volition being put in force, so as to cause a constriction of the bronchial tubes, and generate a current of air of sufficient strength to expel the mucus. To effect this, the mere act of coughing is not sufficient, and consequently *we do not expectorate during sleep;* for this purpose it is necessary for the patient to be awake.

Frequently recurring catarrhal affections, besides generating a state of chronic derangement of the mucous lining of the lungs, have a necessary tendency to produce other bad effects. Dyspnœa is an ordinary attendant on chronic bronchitis: the

vesicular tissue, enfeebled by disease, loses its natural elasticity; and hence the act of respiration is performed weakly, and with considerable difficulty. In addition to this, the stress thrown on the air cells and passages gives rise to emphysema and dilatation of the bronchial tubes.

When this man came into the hospital, he was laboring under an exacerbation of his chronic bronchitis, from a fresh attack of cold; he also suffered from dyspnœa with a tendency to emphysema, and had been much debilitated by the frequent recurrence of his pulmonary symptoms. I do not intend to make any particular observations here on acute bronchitis supervening on chronic; it is a dangerous disease, requiring prompt and careful attention. I merely refer to this case to point out the remedies which were employed, and the principles which guided me in their selection.

At the time of our patient's admission, the fever which accompanied the acute attack had subsided. His pulse was tolerably quiet, neither did he present any derangement of the heart's action, and, so far, had escaped one of the consequences of chronic disease of the lung—namely, dilatation and hypertrophy of the right ventricle. Observe, the most important features in this case, so far as treatment is concerned, were these: there was no general inflammatory condition of the system present; he had neither hot skin nor quick pulse; his expectoration was copious; the chest sounded well on percussion, and the only stethoscopic phenomena observed were extensive minute and moist bronchial rales. The case then stood thus: extensive bronchial inflammation with copious expectoration, unaccompanied by fever, and occurring in a debilitated constitution. All weakening measures were therefore contra-indicated. It is true that the man had dyspnœa, and complained of tightness across his chest—circumstances which might appear to demand the use of the lancet or leeches; if these means had been employed, he would certainly have experienced some relief; but in the course of a few hours the symptoms of distress would have returned; the weakness superinduced by bleeding would give rise to increased secretion into the bronchial tubes, and the patient would be worse than before. Under these circumstances, we refrained from using the lancet or leeches; but, deeming it advisable to get rid of the last traces of inflammatory action; we gave the following mixture:—

℞. Misturæ amygdalarum, ℥ xij.,
Nitratis potassæ, ʒ ij.,
Tartar. emetici, gr. j.,
Tinctur. opii camphorat., ℥ ss.

Ft. mistura pectoralis, sumat cochleare j., amplum omni hora, vel urgente tusse.

In explaining the rationale of this mixture, it is hardly necessary for me to state why the almond emulsion was used. In all cough bottles it is of importance that the basis should consist of some mild mucilaginous fluid; and hence we generally employ for this purpose demulcent syrups, emulsions made with olive oil, spermaceti, or almonds, or decoctions of mucilaginous seeds and roots. With the almond emulsion we combined tartar emetic and nitrate of potash—both antiphlogistic remedies, and calculated to act with peculiar effect in relieving congestion of the bronchial mucous membrane. You are aware that nitrate of potash in large doses is a powerful antiphlogistic, and you have seen it prescribed with excellent effects in cases of acute arthritis treated in this hospital. Nitrate of potash, when given to the amount of two or three drams in the day, combined with two or three grains of tartar emetic, is, next to bleeding, the most efficient means we possess of reducing inflammatory action; and were I to be asked what remedies I should employ in combating inflammation—supposing there were no such things as the lancet, or leeches, or calomel—I should certainly say nitrate of potash and tartar emetic. When given in small doses, this combination proves also extremely serviceable in less severe cases, and it was on this account we gave it in the present instance. To this we joined the camphorated tincture of opium, convinced that its stimulant properties could not prove injurious when combined with antiphlogistics, although it would be improper to administer it alone. Experience has taught that when camphorated tincture of opium is given, in cases of chronic cough with expectoration, it will (if much inflammatory action be present) check the expectoration and bring on dyspnœa. But when combined with nitrate of potash and tartar emetic, its bad effects are corrected, while its sedative influence remains unimpaired.

In addition to this, I ordered the nitro-muriatic acid liniment to be rubbed over his chest. This liniment we are much in the habit of prescribing where a rubefacient is required. It is made by diligently mixing one dram of nitro-muriatic acid and one ounce of lard, by means of a wooden or ivory spatula. When this mixture is comple, two drams of spirits turpentine are added; these ingredients soon separate from, and mutually react upon each other, so that the liniment is spoiled; we, therefore, never make it in large quantities. As his bowels were constipated, I gave him a pill composed of three grains of blue pill, quarter of a grain of colchicum, two grains of scammony, and half a grain of capsicum. Colchicum acts

on the biliary secretion, particularly when combined with blue pill, and hence promotes the general action of the intestines. With these I combined a little capsicum, in consequence of the patient's complaining of being annoyed by constant flatulence. It is a curious fact, that every chronic derangement of the bronchial mucous membrane is accompanied by flatulence. Whether this arises from the irritation of the bronchial membrane spreading by continuity of tissue, and rendering the tongue foul, the stomach weak, and the digestive function unnatural; or whether the derangement of the bronchial mucous membrane, and the imperfect performance of the function of respiration, cause the secretion of air from the lungs to be diminished, in consequence of which air is secreted from the intestinal mucous membrane by a vicarious action—I cannot exactly state, but I think the latter hypothesis not very improbable. It is well known that the mucous membrane of the stomach and bowels enjoys the power of secreting and absorbing air; it secretes carbonic acid, nitrogen, and also other gases which seem peculiar to it—such as sulphuretted hydrogen. I am not aware that there is any distinct evidence that the last-named gas is ever secreted by the bronchial mucous membrane, but, as there are some cases in which the breath is remarkably fetid, I think it remains for future experiments to decide whether it may not be so under certain circumstances. It is, however, by no means improbable, that when an adequate cause produces considerable derangement in the respiratory function, and alters the nature of the aerial secretion from the lung, the mucous lining of the stomach and bowels may take on a vicarious action, and secrete gases analogous to those which in the normal state are secreted by the mucous membrane of the bronchial tubes. I think I have seen some well marked examples of this translation of the function of secreting air from the pulmonary to the intestinal mucous system in cases of spasmodic asthma and hysteria. I have seen patients who, previously to an attack of asthma, had no symptoms of flatulence, and observed that, accordingly as the disease proceeded and the derangement of the respiratory function increased, the bowels became distended with air. In hysteria, also, where derangement of the respiratory function is plainly denoted by the heaving of the chest, sighing, and dyspnœa, there is generally enormous and sudden inflation of the belly, loud borbyrygmi are heard, and there is a constant disengagement of air upwards and downwards.

But to return to our patient. After we had removed all traces of active inflammation, and the case had been reduced

to one of ordinary chronic bronchitis, we changed his cough mixture for the following:—

℞. Misturæ ammoniaci, ℥ vj.
Carbonatis sodæ, ʒ ss.
Tincturæ opii camphorat, ℥ ss.
——— hyoscyami, ʒ j.
Vini ipecacuanhæ, ʒ ij.
Fiat mistura pectoralis, sumat. cochl. j. amp. pro dose.

The carbonate of soda was given with the view of removing some acidity of stomach which he complained of; besides, it is a fact that alkalies produce good effects in many cases of pulmonary irritation, as must have struck you from witnessing the success of the popular remedy for hooping-cough recommended by Mr. Pearson. You will observe, gentlemen, how very different this cough mixture is from the former, it is much more stimulating, and, at the same time, more powerfully anodyne, the opium being here less diluted, and being aided by henbane; the addition of ipecacuanha was intended to prevent a too speedy action on the part of the other ingredients, in diminishing the expectoration and constipating the bowels.

I wish to call your attention to the plan of treatment, not with reference to this case alone, but with respect to chronic bronchitis in general. We first gave a combination of nitrate of potash and tartar emetic, with a view of removing any remaining traces of inflammatory action; we next prescribed the mistura ammoniaci, with camphorated tincture of opium and carbonate of soda, &c.; and, finally, when the cough became entirely chronic, we gave the compound iron mixture, with tincture of hyoscyamus, in draughts, and an electuary, consisting of sulphur, cream of tartar, and senna. I need not repeat what you will find in every treatise on materia medica, with respect to the use of the compound iron mixture; it is not to be given until all traces of fever and local inflammation are removed, and never until the secretion from the lungs is copious, and expectoration free. In such cases, the patient is generally weak, and the inordinate secretion adds to his debility. Here the compound iron mixture proves extremely serviceable, but you should commence its use with caution. Some persons are in the habit of giving it in doses of half an ounce, two or three times a day; this I never do; I begin with a dram, twice or three times a day, in an ounce of spearmint water; and add from half a dram to a dram of tincture of hyoscyamus. The dilution with mint water, and the addition of tincture of hyoscyamus, render it

more valuable, by causing it to be more easily borne by the system, and less likely to be rejected by the stomach.

Let me now explain my reasons for ordering the following electuary:—

℞ Electuarii sennæ, ℥ iij.
Pulveris supertart. potassæ, ℥ j.
Sulphuris loti, ℥ ss.
Syrupi zingiberis, q. s.
Ut fiat electuarium, sumat cochleare, j. parvum bis vel ter quotidie.

In the first place, when giving any stimulant medicine internally, it is essentially necessary to attend to the state of the bowels; in the next place, keeping the bowels freely opened, has a very remarkable effect in diminishing inordinate secretion from the bronchial tubes. Where the patient's strength can bear it, I often diminish supersecretion from the lung by strong hydragogue purgatives, as you saw in the case of a patient in the chronic ward, who had orthopnœa, and such an excessive secretion into the bronchial tubes as to threaten suffocation. The patient being a strong man, and having no symptom of intestinal irritation, I prescribed a bolus, composed of a grain of elaterium, two of calomel, ten of jalap, and five of scammony, forming a powerful hydragogue purgative, which produced several fluid discharges. The man bore its operation well, and I repeated it in two days with the most decided benefit; indeed, he experienced from it more complete relief than he would have done from bleeding, blistering, or any other remedial means. In some cases of bronchitis with excessive secretion, you will be able to produce very striking effects by the use of hydragogue purgatives; this, however, will require both judgment and discretion, and it should be borne in mind, that, in the majority of cases, there are many circumstances which contra-indicate their employment.

With respect to the use of sulphur in this case, I was led to prescribe it, in this and many other similar cases, from observing that chronic cough, and long-continued congestion of the bronchial mucous membrane, were more effectually relieved by the use of sulphureous waters, such as the Lucan and Harrowgate Spas, than by any other remedy that could be devised. I may here also observe, that the Lucan waters produce very striking effects in diseases of the skin, and that I have seen intractable cases of psoriasis, which lasted for years, yield to the use of the Lucan waters. It would appear that sulphur, when taken into the system, is either eliminated by the kidneys in the form of sulphates, or exhaled from the

skin and mucous tissues in the form of sulphuretted hydrogen, and in this way we arrive at some explanation of its action in diseases of the skin, and chronic irritation of the bronchial mucous membrane. In fact, paradoxical as it may appear, sulphur, although evidently stimulating, is nevertheless very efficacious in curing many diseases connected with, or depending on, inflammation or congestion. Thus exhibited internally and properly combined, what remedy gives such prompt and certain relief in that painful affection, piles? How rapidly does the specific irritation of the skin, termed scabies, yield to its use! These, and similar facts, which might be brought forward in abundance, ought to countenance the use of this medicine in certain chronic inflammatory affections of the bronchial tubes. The celebrated Hoffman was in the habit of adding sulphur to his cough prescriptions in all cases of chronic bronchitis in the aged and debilitated; and I have no doubt that from five to ten grains of sulphur, taken three or four times in the day, is one of the best remedies that can be prescribed in cases of chronic cough, accompanied by constitutional debility and copious secretion into the bronchial tubes. Within the last four years, my attention has been particularly directed to the use of sulphur in this and other affections, and I can state from experience that it is a most valuable remedy. As it has a tendency to produce elevation of the pulse, increased heat of skin and sweating, it will be necessary to temper its stimulant properties by combining it with cream of tartar, which is a cooling aperient, and has the additional advantages of determining gently to the kidneys.* The addition of the electuary of senna gives additional value to the combination, and quickens its action on the intestines.

Such, gentlemen, are the principles that guided me in prescribing for this man. The long continuance of the complaint, the serious and extensive derangement of the pulmonary mucous membrane, the age, debility, and impoverished circumstances of the patient, forbid me to hope for a perfect cure; but he has been much relieved, and the same remedies applied to less desperate cases would have produced very striking effects. Still, if fortune were this moment to prove favorable to the poor fellow, if, when he leaves the hospital, instead of returning to hardship and exposure, he had the means of living in comfort, taking proper care of himself, travelling for health and amusement, and using a course of chalybeate spa waters, I have little doubt that with these aids the reparative powers of nature would succeed in obliterating every trace of pulmonary derangement.

*Baglivi has well said, "In morbis pectoris ad vias urinæ ducendum est."

Permit me, gentlemen, to make a few observations here on what is popularly termed, cough. What is cough? A sudden and violent expulsion of air from the lungs, produced by forcible contraction of the diaphragm, aided by the abdominal and other expiratory muscles. What is the cause of cough? Pulmonary irritation. What is the nature of this pulmonary irritation?

Here, gentlemen, is a question which every practitioner should put to himself when called on to treat a case of cough, and what affection is there which so frequently demands our assistance, and tasks our ingenuity? How abundant, how varied, are the examples of cough we meet with in our daily practice! How obscure do we not find its nature on many occasions, and how difficult and perplexing its treatment! Where the source of irritation is manifest, where the nature of the disease is simple and easily detected, where, after a proper examination, we can point to some part of the respiratory system, and say here is the seat of the disease; in such cases, indeed, our course is sufficiently clear; we may proceed with confidence, and practice with success. But how often are we, after weeks and even months of close and painful attention, baffled in our best-directed efforts, and forced to admit the humbling conviction that all our remedies are inefficient and useless, and that our character, as well as that of the profession, is likely to suffer in public estimation! How often, too, do we discover with surprise, that the cough which we have been treating for weeks as a pure pulmonary affection, depends not on any primary derangement of the respiratory system itself, but upon the irritation of some distant organ, or upon peculiar conditions of the whole economy!

Before I proceed to enquire into the nature of the various sources of pulmonary irritation producing cough, I wish to remark that the exciting cause, or, in other words, that which immediately precedes and seems to give rise to a tendency to cough, is a sensation of tickling in the mucous membrane of the trachea, close to its bifurcation, and opposite the hollow at the fore part of the neck. It is also a curious fact that this sensation of tickling or itching is peculiar to this situation, being never felt in any other part of the pulmonary mucous system. Whether the disease be seated above, as in case of laryngeal affections, or whether it be below, as in case of disease of the lining membrane or parenchyma of the lung, it is here alone that the tickling sensation is felt. Another circumstance equally remarkable, and equally difficult of explanation, is the effect of position in cough. Persons laboring

under slight bronchitis, or rather slight inflammation of the trachea, who scarcely cough half a dozen times in the course of the day, will, the moment they lie down at night, be seized with a violent and harassing cough, which may last for several minutes, and sometimes for hours, with little intermission. We can easily understand why empyema or pneumonia of one side of the chest may produce cough in certain positions and not in others, for here we have an obvious physical cause; the accumulated fluid in the pleural cavity in the one case, and the diseased lung, whose specific gravity has been much increased by solidification, in the other, exercise an inconvenient degree of pressure on the sound lung, and hence give rise to irritation and cough, particularly in those positions which favor the operation of these physical causes of irritation. Here, however, the cause of irritation is very obscure. It may (but this I merely offer as an hypothesis) depend on the fluid secreted by the mucous membrane trickling over that part of the trachea where the tickling sensation is felt, the flow of mucous to this part being favored by the recumbent position. That it does not depend on any supposed temporary congestion and irritation of the lung, from the impression made on the skin by cold bed-clothes, I am quite convinced, for I have repeatedly observed it in persons warmly dressed, from merely lying down on a sofa close to the fire. You will, therefore, bear in mind, gentlemen, that although usually, when coughing is induced by any sudden change of position, we may infer that it is connected with some serious lesion of the lungs or pleura, yet we must not attach too much importance to this symptom in arriving at this conclusion, for cases are occasionally met with, in which mere tracheal or bronchial inflammation is attended with the same symptom to a very remarkable degree.

I may observe, *en passant*, that the sensation of tickling or itching appears to be almost exclusively confined to the skin. Here it appears to be dependent on slight causes, apparently incapable of producing that modification of nervous sensation termed pain. In other cases it seems to be connected with the rise and decline of the phenomena which indicate inflammatory action, arising in the first case (where it is generally less observable) from that nervous modification which precedes inflammation, and in the second being connected with some change in the nerves of the part which precedes its return to a healthy condition. It does not appear to affect the mucous tissues, except in a very slight degree, and under peculiar circumstances. It is not observed in the pulmonary mucous tissue, except at that part of the

trachea which I have already mentioned, and it does not occur in any part of the intestinal mucous membrane. The only parts connected with the intestinal tube, in which it is felt, are the nose and on the anus, and here it is within the reach of scratching, the ordinary mode of relief. This is a fortunate circumstance, gentlemen, for if any part of your bowels were to itch as your skin sometimes does the annoyance would be quite intolerable. If the presence of lumbrici in the small intestines, instead of producing a troublesome itching of the nose, as it often does,—if it produced, I say, a degree of itching equally intense in the mucous membrane of the bowels and stomach, what patient could endure greater torments than a person so afflicted? If ascarides gave rise to as intense a degree of itching within the colon, as they occasion at the verge of the anus, how dreadful would be the suffering thus induced!

Passing over the obvious and well known sources of pulmonary irritation, producing cough, such as bronchitis, pneumonia, &c., the first cause to which I shall direct your attention is one of not unfrequent occurrence, and where a mistake in diagnosis may lead to a practice useless to the patient and discreditable to the practitioner. The best mode of illustrating this is by giving a brief detail of a case which I attended with Dr. Shekleton. A young lady, residing in the neighborhood of Dorset street, was attacked with symptoms of violent and alarming bronchitis. The fits of coughing went on for hours with extraordinary intensity; it was dry, extremely loud, hollow, and repeated every five or six seconds, night and day, when she was asleep as well as when she was awake. Its violence was such that it threatened, to use a vulgar but expressive phrase, to tear her chest in pieces, and all her friends wondered how her frame could withstand so constant and so terrible an agitation; and yet she fell not away proportionally in flesh, had no fever, and her chest exhibited nothing beyond the rales usually attendant on dry bronchitis. She was bled, leeched, blistered, and got the tartar-emetic mixture, but without experiencing the least relief. We next tried antispasmodics, varying and combining them in every way our ingenuity could suggest, still no change. We next had recourse to every species of narcotics, exhibiting in turn the various preparations of conium, hyoscyamus, opium, and prussic acid, but without the slightest benefit. Foiled in all our attempts we gave up the case in despair and discontinued our visits. Meeting Dr. Shekleton some time afterwards I enquired anxiously after our patient, and was surprised to hear that she was quite recovered and

in the enjoyment of excellent health. *She had been cured all at once by an old woman.* This veteran practitioner, a servant in the family, suggested the exhibition of a large dose of spirits of turpentine, with castor oil, for the purpose of relieving a sudden attack of colic; two or three hours afterwards the young lady passed a large mass of tape worm, and from that moment every symptom of pulmonary irritation disappeared.

The next kind of cough, in which the cause of pulmonary irritation is often misunderstood, is that which occurs in hysteric females. This kind of cough is one of the most alarming diseases in appearance you can possibly witness; in some it is loud, ringing, incessant, and so intensely violent, that one wonders how the air-cells, or blood-vessels, escape being ruptured. In others it is quite as incessant, occurring every two or three seconds, night and day, but is not very loud, and, indeed, in some it scarcely amounts to more than a constant teazing hem; in general the pulse is quick, but it is the quick pulse of hysteria, not of inflammation or fever. The patient suffers no aggravation of the cough from inspiring deeply, and her countenance exhibits no proof of malaeration of the blood, on the contrary it is blanched and pallid. She complains of variable or deficient appetite, headache, cold feet, and irregular or absent catamenia, although the cough continues for weeks, or even months, she does not emaciate like a person in incipient phthisis, although so much disturbed by the cough, and subsisting on so small a quantity of food.

Here the history of the case, a knowledge of the patient's habit, and the use of the stethoscope, are of great value. You will find that the patient is subject to hysteria, that she is generally pale and of a nervous habit, that the attack came on suddenly, and was superinduced by mental emotion, or some cause acting on the nervous system, or else arose gradually as one of the sequelæ of catamenial disturbance, that the heat of skin and state of pulse are by no means proportioned to the violence of the symptoms, and the stethoscope will tell you that the signs of organic derangement of the lung are absent. You will thus be enabled to arrive at an accurate notion of the nature of the disease, and you will save the patient from the useless and often dangerous employment of antiphlogistic means. Bleeding and leeching are, generally speaking, injurious; such cases are best treated by stimulants, antispasmodics, and stimulant purgatives, together with the change of air, travelling, and the use of chalybeate spa waters.

The third species of obscure cough, to which I shall direct your attention is one of deep importance for many reasons. It is that species of cough which depends upon pulmonary irritation connected with a venereal taint in the system. That syphilis may attack the pulmonary as well as the cutaneous, osseous, mucous, and other tissues, is not a discovery of modern times; it is a form of the disease long known, and you will find it mentioned by many of the old writers. Since syphilis has been classed by Willan and others among diseases of the skin, this notion seems to have been either abandoned or forgotten, but, as it strikes me, with very little justice. I entertain a firm conviction, that syphilis may affect the pulmonary as well as it does the cutaneous, or mucous, or osseous tissues; and that a patient, laboring under a venereal taint, may have irritation from this cause set up in the lung as well as in any of those organs in which it is usually manifested. The first person who mentioned this circumstance to me was the late Mr. Hewson, and since that time I have had repeated opportunities of confirming the truth of his opinion. Richter, Alibert, and Paget have well observed, that Willan and Bateman's classification of diseases of the skin is liable to the paramount objection, that it has no reference to the constitutional origin of cutaneous affections. I have the very same fault to find with modern treatises on diseases of the lungs. Pathologists have indeed enquired most accurately into the numerous morbid changes to which the pulmonary tissue is subject, but they have omitted a no less important part of their task, which is to investigate the states of constitution which originated these changes. The agency, indeed, of scrofula has been enquired into with care, but how little attention has been paid to rheumatism, gout, syphilis, and scurvy, the fruitful sources of numerous diseases of the chest.

By far the most interesting point connected with this affection is its diagnosis; on this every thing depends. The great importance attached to the diagnosis arises from the circumstance of this disease presenting symptoms analogous to, and consequently being frequently confounded with, phthisis. A patient comes to consult you for cough; you find him pale, emaciated, and feeble; he sleeps badly, and is feverish at night, and has a tendency to sweat. Here there may be a double source of error. If the disease be mistaken for tubercle, and mercury not given, bad consequences will result; on the other hand, if tubercles be present, the effect of administering mercury will be to precipitate the disease to a fatal issue.

What is the nature of this disease, and how are you to recognize it? Mainly, I answer, by the history of the disease. If the patient's sufferings have commenced at the period of time, after primary sores on the genitals, when secondary symptoms usually make their appearance; if some of his complaints are clearly traceable to this source; if, along with debility, night-sweats, emaciation, nervous irritability, and broken rest at night, we find cough; and if this group of symptoms have associated themselves with others, evidently syphilitic—such as periostitis, sore throat, and eruption on the skin—then we may, with confidence, refer all to the same origin, and may look upon the patient as laboring under a syphilitic cachexy, affecting the lungs as well as other parts. In forming this diagnosis much caution and care are necessary, and we must not draw our conclusion until we have repeatedly examined the chest by means of auscultation and percussion; if these fail to detect any tangible signs of tubercles, we may then proceed to act upon our decision with greater confidence, and may advise a sufficient but cautious use of mercury. Under such circumstances, it is most pleasing to observe the speedy improvement in the patient's looks and symptoms; the fever, night-sweats, and watchfulness diminish; he begins to get flesh and strength, and, with the symptoms of lues, the cough and pectoral affection disappear. I am not prepared to say which of the pulmonary tissues is most usually attacked by the venereal poison, but I believe that it chiefly tends to the bronchial mucous membrane, although, like other animal poisons—*e. g.*, those of measles and scarlatina—it may also occasionally produce pneumonia.

The fourth species of obscure pulmonary irritation, producing cough, is that which is connected with a gouty diathesis. Gout may attack almost every tissue in the body. We may have it in the joints, as you are well aware of; we may have it in the muscles and muscular aponeuroses, forming what has been termed the rheumatic gout; it occurs frequently in the fibrous tissues, and I have several times observed it in the cellular substance of various parts of the body, forming either diffuse œdema or tumors, which are exceedingly tender to the touch, and which are removed by treatment calculated to relieve the constitutional affection. It may attack the heart, giving rise to true pericarditis, or else to a functional disease with palpitations—a sensation of fluttering and sinking about that organ, and very remarkable intermission of the pulse; or it may affect the stomach, occasioning dangerous spasm or various dyspeptic symptoms; or it may seize on the intestines, producing irritation, colic, and gouty diarrhœa. I remember

a patient, of a confirmed gouty habit, expressing a great deal of surprise at getting an attack of gout in the testicle, for he could not conceive how a disease which generally affects the joints could occur in an organ so different in its nature. I replied, that the matter could easily be explained; because fibrous tissue, which gout most frequently attacks, enters into the composition of the testicle as well as that of the joints. Indeed, the testicle, with reference to the texture of its envelopes and the extent of motion it enjoys, may be said to be provided with a sac-like joint. In like manner, gout very frequently attacks the mucous membrane of the trachea or bronchial tubes, causing a dry, annoying, and often a very obstinate cough. Where this cough comes on along with the fit of inflammation of the joints, its true nature is frequently overlooked, and it is believed to have originated in cold and to be mere common bronchitis. No matter what be the cause of inflammation in a gouty habit—no matter what the organ attacked by the inflammation be—it almost invariably assumes the character of true gouty inflammation. If a gouty person sprains a toe or an ancle, matters, after progressing for a time in the ordinary way, are sure in the end to exhibit a change of character; and the inflamed parts are observed either to grow unexpectedly worse, or to become stationary, at a time when a speedy termination of the local affection seemed approaching. This is owing to its being now modified by the constitutional tendency to gout, which localises itself in the affected part. Precisely the same relations may be often observed between common bronchitis, produced by cold in a gouty habit, and the gouty bronchitis it indirectly produces. Gouty bronchitis often becomes chronic, continuing until it is relieved by a regular fit of the gout in the extremities.

The fifth species of pulmonary irritation, in which the source of the disease is more or less obscure, is that which is connected with the scorbutic diathesis. It is important to be aware of this, particularly for those who have charge of the health of the poorer classes, which is almost of more value than that of the rich, for on it their labor and their means of support depend. Among the poor, particularly in cities where the majority live on salt provisions, the scorbutic diathesis is very prevalent. It manifests itself either in the form of purpura, or in tendencies to hemorrhage from the nose, stomach, bowels, and bladder. It sometimes attacks the lungs, producing irritation of the bronchial mucous membrane, with cough and spitting of blood, and occasionally gives rise to pulmonary apoplexy. It is evident that pulmo-

nic cases of this nature, originating in a scorbutic diathesis produced by confined air, damp lodging, and a salt diet, will require a treatment peculiar to themselves, both during the attack and during convalescence.

The last source of pulmonary irritation, to which I shall direct your attention, is that which proceeds from scrofula. You all know that scrofula has a tendency to attack every tissue in the body, but you may not perhaps be aware that it may affect those tissues in very different ways, and that scrofulous irritation may manifest itself in various forms, from the most trifling and transitory to the most extensive and permanent. I recollect a case I attended with Dr. Jacob, in which this fact struck me very forcibly. A fine boy, of high complexion, precocious intellect, and other marks of the scrofulous diathesis, got an attack of scrofulous ophthalmia of an intense character, and it required all the skill and ingenuity of Dr. Jacob to save him from blindness. During the period of our attendance, his brother (who was also of a strumous habit) began to complain of parts of his arm being sometimes a little sore. This circumstance attracted my attention, and on examination I found that several circular diffused swellings, of various sizes, often equaling half a crown in diameter, had successively appeared on different parts of his extremities and body. They evidently depended on inflammation of the sub-cutaneous cellular tissue, and exhibited a remarkable example of a most transitory local affection, produced by a constitutional cause—for these swellings arose, arrived at their acme, and subsided in the space of ten or twelve hours; they constituted, in truth, the first efforts of the scrofulous diathesis to localise itself, and, after a few weeks' continuance, they were replaced by distinct and *fixed* scrofulous inflammation of the metatarsal bones.

Here was a very curious and instructive fact. A boy, evidently of a scrofulous diathesis, has circumscribed tumors, which arise, come to maturity of irritation, and subside in the course of a few hours. In some weeks afterwards, scrofulous irritation, in a decided and permanent form, fixes itself in the foot, producing inflammation and ulceration. From this it may be inferred, that scrofula (for in this case I am firmly convinced these tumors were connected with strumous diathesis) may attack parts not only in its more permanent and destructive forms, but also in a manner so trifling and so transitory as to subside in a few hours, and leave no trace of its existence. The inferences deducible from this fact are numerous and important; for if scrofula may thus produce an acute and transitory inflammation of the sub-cutaneous cellu-

lar tissue, surely it may occasionally give rise to somewhat similar affections of internal organs—as the bowels, the lungs, &c.—and thus may occasion an acute bronchitis, a pneumonia, or an inflammation of the mucous membrane of the intestines, totally independent of the operation of cold, or the usual causes of such affections. It has been too much the custom to refer merely chronic and fixed local inflammations to the agency of constitutional causes. The example before us proves that even the most transitory may have this origin.

Scrofulous irritation may affect either the lining membrane or the parenchyma of the lung—giving rise in the one case to scrofulous bronchitis, in the other to scrofulous pneumonia; two affections which may exist separately or combined, and either of which may prove fatal, with or without the developement of tubercles in the lungs. Tubercles have, as I have elsewhere proved, too exclusively engrossed the attention of those who have investigated the pathology of phthisis; they are a very frequent product of the scrofulous diathesis, but the scrofulous bronchitis and scrofulous pneumonia are still more frequent and more important, and do not, as is falsely supposed, depend upon the presence of tubercles in the lungs. The pneumonia, the bronchitis, and the tubercles, where they occur together, are all produced by one common cause—scrofula. Of this more hereafter.

On St. Vitus's Dance. By Dr. Stiebel.

Nearly one hundred cases of this disease have come under the notice of Dr. Stiebel; and in not one of these, he says, was wanting the evidence of an irritation of the spinal nerves. Few of the patients, during the course of the disease, have not had pain in some one of the vertebræ, and all, either in consequence of the treatment employed or spontaneously, have recovered. Dr. Stiebel believes that the cause of this disease is an irritation of the motor nerves of the spinal marrow or of the medulla oblongata, depending on inflammation or turgescence. Chorea almost always originates during the developement of the spine and of the spinal marrow; generally between the seventh and seventeeth years, but occasionally at later periods of life.

The following appears to be the anatomical explanation of the disease:—The spinal marrow, and the origins of its

nerves, lie within a bony cavity. If, during their development, there occurs a want of relation between the bones and the nervous system, so that the cavity does not correspond to the increasing marrow, the nervous origins become subject to an irritation as of a foreign body. This disproportion may be the effect of swelling of the spine, without previous change in the nerves, as well as of turgescence of the membranes of the nerves and the nerves themselves, the spine remaining unaltered; but the first is of most frequent occurrence. The spasms generally cease during sleep, although the irritation continues. The chorea may be limited to one side of the body, or to parts of less extent, according to the situation of the irritation. It is liable also to change its place, to become general after having been but partial, and *vice versa.* It may also alternate with paralysis, which is as little dangerous as the original disease. The change of locality of the disease is not sudden, as in hysteric spasms, but at different periods of the progress of developement, each of which is of a certain duration.

Partial chorea of individual motor nerves of the organs of sense constitutes some of the most remarkable forms of the disease; such, for instance, as a constant twitching of the eyelids, distortion of the eyes, abnormal motions of the tongue, and almost uniterrupted sneezing. A very common form of partial chorea consists in the constant and unavoidable utterance of inarticulate sounds. As all the motor nerves of the organ of voice are not affected, the patient can still speak, but with effort and stammering, the inarticulate sounds being afterwards made more uninterruptedly and with greater violence. This utterance of sounds frequently continues for weeks, only interrupted during sleep; a long-continued aphonia frequently follows, or a shooting pain on one or the other side of the breast, or asthma. Palpitation of the heart accompanies chorea, both partial and general. In examining individuals suffering from either local or general chorea, it will be very rare not to find tenderness and swelling of some vertebral bone; but such an examination must be repeated, as the sensibility is frequently not discoverable until the disease has lasted for some time. In all the cases of chorea which Dr. Stiebel has examined, he has discovered no other cause than that above mentioned, although he does not deny the possibility of the existence of other causes;—e. g. metastasis of rheumatic inflammation, injuries of the spine, &c. There is doubtless an hereditary disposition to chorea, it having been known to affect whole families. It is particularly frequent among the Jews. Dr. S. has not himself had any opportunity

of examining the bodies of individuals who have died of chorea; but, in all the cases which he has read, changes in the spinal marrow, its membranes, or in the spine, are mentioned.

The treatment of chorea is simple. Leeches, followed by mercurial inunctions, and then by more active exutories, are indicated when a painful vertebra is found to exist. If no tender point is at first discoverable, leeches and blisters may be applied along the spine. Calomel is generally given internally as a derivative. If the disease is not thus relieved, repeated cold douche-baths on the spine are almost always of advantage. As a general rule, the disease is cured between the fourteenth and the twenty-first day by this treatment; but, should not this happen, the disease may be left to nature, which almost always put an end to it in the progress of development. At the same time, however, it is necessary to guard against the occurrence of any spinal deviations, and irritant frictions may be applied to the spine. Preparations of iron have sometimes appeared to be of use. The description of the disease which is here given will suffice to account for the credit which such numerous remedies have acquired in the cure of chorea; their use having been coincident with the natural cure. It is not intended to deny that there may be a specific remedy, but only that we at present know not what it is.—*British and For. Med. Rev.*

Wochenschrift fur die gesammte Heilkunde. No. I. 1837.

Report on the Inoculation of Morphine, &c. proposed by Dr. Lafargue. By M. Martin-Solon.

The effects produced by the inoculation of morphine are considered by Dr. Lafargue as worthy of consideration, both in their bearing on practical medicine and on medico-legal questions. If the point of a lancet, dipped in an aqueous solution of morphine, is inserted horizontally, about one line in depth beneath the epidermis, and is allowed to remain there a few seconds, the following effects are observed:—About a minute and a half after the operation, a small pimple, with a diffuse rosy areola, and slightly itching, is observed. In about twenty minutes, the pimple becomes about four lines in diameter, and one line in thickness; it is flattened. Its color is somewhat more than that of the skin, it is hard, its areola is very red, and about an inch and a half in diameter; its heat

has increased, but the sensation of itching remains about the same. During the first hour, the pimple and its areola are at their highest degree of developement. From this time, the appearances diminish, and at the end of two or three hours the red color of the skin has entirely disappeared, the pimple has become very flat; but it does not entirely disappear, until from twelve to twenty-four hours after the operation. If several punctures are made near one another, in the same manner, the appearances of the pimples are as above described, but the areola are confluent; the heat and itching are considerably increased. The appearances, however, disappear in the same time as when a single puncture only has been made. The general effects which Dr. Lafargue experienced from thirteen punctures thus made upon the front of his forearm were, heaviness of the head, frequent yawnings, clamminess of the mouth, and an invincible desire to sleep; the quantity of muriate of morphia employed not having exceeded a quarter of a grain.

The effects just noticed, Dr. L. considers as showing that the inoculation of morphia may supersede the use of blisters and ammoniacal applications, and that it merits employment more particularly where the object of the physician is to produce the local effects of morphine. Its effects as a rubefacient are also very marked. Hence its probable utility in superficial neuralgia and in chronic rheumatism, &c. The local effects produced by the inoculation of belladonna, of strychnine, of sulphate of quinine, were different from those above mentioned. In employing other opiate preparations, such as the laudanum of Sydenham, and solutions of opium in fat, milk, coffee, beer, mucus, acetic acid, and gelatine, the proportion of opium being extremely small, the same results were obtained, and no such effects were produced when any of these substances were inoculated without the opium.

M. Martin-Solon repeated the experiments of Dr. Lafargue. From the inoculation of all the common preparations of opium, he observed the same effects as those above mentioned; except that the papulæ sometimes acquired a diameter of an inch and a half, and that they then became radiated and diffuse. To ascertain whether any other substances were capable of producing the same phenomena, belladonna, strychnine, the gastric juices, chyme, &c. were employed, and the effects which were observed destroyed the exclusiveness which Dr. L. wishes to attribute to the action of preparations of opium.

The conclusion which may be derived from these experiments, may be of some assistance in determining the absence

of opium from a fluid which is suspected to contain it; seeing that in all the cases in which fluids containing opium were inoculated (in one instance, the proportion of opium to the solvent was as 1 to 2000,) the phenomena described above were observed by both Dr. Lafargue and M. Solon. The development of the papula can, however, be only regarded as presumptive evidence of the presence of opium; seeing that other substances are capable of producing effects so nearly identical as not to admit of any definite distinction.

Dr. Lafargue has also inoculated a concentrated solution of emetic tartar and the croton oil. The former has always produced a pustule similar to that of acne simplex, containing pus, twenty-four hours after the operation; and the effect of croton oil has constantly been the production of a furuncle thirty-six hours after the introduction of the medicine. Neither of these substances has, however, been sufficiently employed to allow of any inference as to the advantage which this mode of application possesses over that in general use. Its simplicity, nevertheless, renders such an experiment very easy.—*Ib.*

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On a peculiar Spasmodic Affection of the Fingers. By Dr. Albers, of Berlin.*

Dr. Albers has met with three cases of this singular affection, in all of which the individual was incapable of holding a pen to write a line. Every attempt to write ended in the pen's slipping away across the paper in an oblique direction; then the thumb, index, and middle finger would begin to tremble, or would move convulsively apart, and the pen finally fall from the hand. In all, the complaint lasted several years without the supervention of other symptoms, and the hand could always be used for any operation except writing, whatever strength or tact it might require. One of these

*Note. This singular neuralgic affection, we do not remember to have seen noticed by any writer before. The popular and talented editor of the Louisville Journal is the subject of this very inconvenient, as well as singular malady, and one of the editors of this Journal recommended to him an issue on the inner side of the arm, in the course of the brachial nerves, without obtaining, however, any perceptible advantage. The issue was not kept open long and never discharged very freely. He is compelled to write with his left hand.

three individuals, though totally unable to use a pen, could easily lift a weight of 100lbs. with his right hand. Two of them, with the exception of this complaint, enjoy perfect health, and manifest no other symptom of a nervous affection; a third would seem, from the manner in which he drags his feet in walking, to suffer from disease of the spinal marrow, but he moves without exertion or fatigue, and has been in the same state of health for years. The following is an account of two of the cases:—

Case I. A bookseller, aged forty-seven, enjoyed the best health till the year 1818, and, indeed, only suffers now from piles and their consequences. It was in the above year that the first symptoms of this complaint manifested themselves. At first it was not of much consequence, and only made it rather more difficult and tedious for him to write. He, therefore, took but little notice of it, particularly as his hand was not weakened in the least, and was quite as useful as before. His medical advisers, to whom he incidentally spoke, attributed the affection to obstinate rheumatism, and recommended liniments accordingly. In a year, however, it had made such rapid progress that it was impossible for him any longer to hold a pen. When he attempted to write, his will had no effect upon the movements of his fingers, and his pen slipped either upwards or downwards, or else his hand began to tremble, while the fingers started away from each other, and so let drop the pen. Notwithstanding that it was impossible to write with it, the hand was and is equal to any other exercise, and has never been at all debilitated. Pain has never been felt in it, but in the arm, at first, was a feeling of great fatigue, and in the hand, of cold, as of a current of air. Several physicians held this feeling to be an illusion, but the patient indicates the situation of the superficial volar arch of nerves as its seat, whence, he says, it is continued into the fingers. The remedies which were employed against it, such as arm-baths of hot brandy, frictions with the *acidum formicum*, cold baths, vapour baths, the envelopment of the arm in wax taffety and woollen cloth deeply dyed with indigo, as also animal baths, (which, however, were not long continued,) were totally unavailing. When Dr. A. visited Berlin, for a short time, in 1820, he saw this patient, to whom the ill-success of the treatment to which he had been hitherto subjected was become a source of great anxiety. Excepting his hand, he was quite well, but unable to write, and, therefore, to carry on his business. Dr. A. undertook the case, and, regarding it as purely nervous, he made a small issue half-way between the acromium and the last cervical vertebra; conse-

quently, where the four last cervical nerves and the first dorsal join to form the brachial plexus. He next recommended his patient to make use of a penholder fixed in cork, which, from its larger circumference, was easily held. In three months the issue was productive of the best results. The affection diminished daily; the cork was soon unnecessary; with a common pen, he was able to write as easily and well as he had ever done before, and he believes that the disease would never have returned if the issue had not been closed after a lapse of two years. The consequence of this was, that, six months afterwards, the affection returned in all its former force. A seton was now made where the issue had formerly been, and was kept up for five months, but without avail. The actual cautery, which Dr. V., who was written to, recommended to be applied in two lines from the cervical verterbræ to the tip of the shoulder, the patient's medical attendant did not think it advisable to have recourse to. The patient now determined to learn to write with his left hand: he soon succeeded, and continued in this practice for five years; feeling, it should be remarked, at intervals, a slight attack in this hand, too, of the disease with which the other was permanently affected. About this time his old physician died, and his new one inspired him with fresh hopes of the possibility of a cure. Electricity, galvanism, the baths, &c. of Toeplitz, friction with ammoniacal ointment all over the arm, the application of the moxa in five places from the wrist to the shoulder-joint, sea-bathing, and nux vomica internally, in gradually increased and at last very large doses, were productive of not the slightest result; and the disease is now, after a lapse of twelve years, just what it was at first. The patient has, at last, dismissed all his physicians, and, contented with attempting to remedy the inconvenience of his situation, he uses a wooden apparatus, with which he succeeds in steadying his right hand so as to be able to write with it.

Case II. (communicated by Dr. Siebold, of Gottingen.) This case is of thirty years' standing, and is that of a man of sixty years of age, who has given up all hopes of cure, and who, like the person above mentioned, only seeks to obviate the inconvenience of his situation by mechanical means. To his twenty-seventh year he wrote, with the greatest ease, a perfectly legible hand. His leisure hours he was then accustomed to devote to painting, but this did not at all affect the facility with which he wrote. In 1801, however, when he entered on a situation where he had to write a great deal, he remarked that he could not manage his hand with such ease as before, and that he was obliged to press his thumb more

firmly on his pencil and brush. He now gave up painting, for which he found himself incapacitated. Writing, too, began soon to cause him greater difficulty. His thumb moved involuntarily, and pressed without interruption upon the pen, so that his writing became nearly illegible. When he wrote for any length of time, he felt a pain in the first joint of the thumb: in short, the disease rapidly developed itself in the form in which it has maintained to the present. The patient has never been, properly speaking, ill since his childhood, and has never suffered from any eruption. He has always been quite free from gouty and rheumatic pains, and his right hand and arm were originally strong and healthy. He has been subject to violent chronic headaches and to piles, but of late years only. His only great cause of complaint has been the present affection. The four fingers of his right hand are in their normal state; but the thumb, whether he move his hand or not, is continually in motion from right to left. In the first joint there is little action, but the second presses so forcibly towards the palm that, if he hold it with his left hand, and place a pen between his middle and index finger, he cannot write with it, on account of the motion which the pressure of the thumb induces in the latter. Any thing that requires the use of the whole hand he can take hold of, and manage without either difficulty or pain; but he is unequal to any delicate manœuvre where the co-operation of the thumb is required. No intensity of volition can cause the thumb to stay its motion, which it keeps on uninterruptedly. During the twenty years which have elapsed since the first rise of the complaint, numerous physicians have been consulted respecting it. Their prescriptions have been, according as they referred it to gout, paralysis, or nervous weakness, spirituous frictions, tonic arm-baths, moxa, electricity, shower-baths on the hand and arm, &c. &c.; but all have been equally unavailing. In 1808, the patient learnt to write with his left hand, but he exerted it for this purpose to such an extent that he paralyzed it, so as to render it nearly useless. Dictation was now his only resource: what he himself wrote was with a thick lead-pencil, which he grasped with his whole hand. Six years ago it was announced in the "General Indicator" that a ring had been found useful in a similar case. On reading this, the patient ordered one to be made like it for himself. It is placed between the first and second joints of the index finger, and encloses with the latter a pen, for holding which, therefore, neither thumb nor middle finger is required. With its aid, he is now able to write tolerably well, notwithstanding that the constant move-

ment of the thumb causes a little uncertainty in all the motions of the hand.

Dr. Albers classes the above affection amongst diseases of the nerves; but whether it be attended with, or independent of, structural derangement, he does not affirm. If we regard merely the impotence of the will to regulate the motions of the fingers, the disease is comparable to St. Vitus' dance, and might be called a *chorea partialis;* but then it generally happens, in these cases, that the fingers take a certain direction, and that the pen, in writing, slips either upwards or downwards.—*Ib.*

Med. Zeitung v. Ver. f. Heilk. in Preussen. No. 9. 1836.

OBSTETRICAL MEDICINE.

The *Archives Generales de Medicine,* for May, 1837, contains a case of retroversion of the uterus, which, on account of the lesion accompanying it, is unique in the records of medicine. The case was communicated by M. Mayor, of Lausain, and professor Paul Dubois subjoins some reflections: "J. G.———, a peasant, aged 32 years, the mother of three children, was about three and a half months advanced in pregnancy, when she was attacked on the 7th November, 1836, with vague pains, which nevertheless disquieted her very much. This occurred in the day, and at night when she lay down, the pains became so severe as to extort her cries, and her mother-in-law, who had assisted her in her former accouchements, believed that abortion was threatened. A tumor was soon discovered to be escaping from the genitals; a midwife and an accoucheur were immediately sent for, but, on account of the distance, the latter did not arrive until half past 3 o'olock in the morning. The tumor was enormous; after some examination, the surgeon recognised it as the uterus, in a state of complete retroversion, and succeeded in replacing it; but the patient died a few moments after the reduction. Public rumor attributing her death to criminal attempts, two physicians were appointed to make an autopsic examination 57 hours after death. The external organs of generation were found slightly open, bringing to view, at the depth of two lines, in the direction of the fourchette, a jagged wound. The vagina appeared to be smooth to the touch, and the os uteri, which was closed and not engorged, was found forwards against the ossa pubis. The vagina was relaxed, and the body of the uterus quite mobile. The abdomen

having been opened and the ossa pubis cut away, the bladder was brought to view, and was large and flaccid, containing no urine, though rising above the pubes, and covering in part the body of the uterus, appearing to have been distended.

The uterus, of a pyramidal figure, measured six inches in length and five in breadth, and was soft, flaccid and reddish, presenting some ecchymodes and small, semi-circular lacerations, resembling scratches with the finger nails. A transverse rent, nine inches in extent, was found in that part of the peritonœum which is reflected from the posterior part of the vagina to the sacrum; and this was the superior orifice of an accidental canal, whose inferior orifice was constituted by the laceration of the vagina already mentioned, the size of which was about 5 inches when dilated; the middle of this canal being the lacerated recto-vaginal septum. This canal, therefore, established, between the cavity of the abdomen and the posterior wall of the vagina, a free communication.

In fact by pushing the body of the uterus into the superior opening, it was made to protrude, without difficulty, at the inferior, near the fourchette, and the position of the organ could be re-produced, which was observed by the first physician called during the life of the subject.

The cervix uteri was elongated and closed; it as well as the body of the uterus was laid open by an incision, and the amniotic sac, containing a fœtus of about three and a half months, could then be seen. The umbilical cord was sound and inserted into the placenta, which was bruised and black. There were some ecchymoses on the fœtus.

The mucous and muscular coats of the rectum were healthy. All the abdominal viscera were very pale, and the blood vessels empty.

This case, so remarkable for its accompanying circumstances, was rendered still more so by the judicial action to which it gave rise. The physicians, who made the post mortem examination, considered the death to be owing to hemorrhagy and the pain produced by the serous lesions about the pelvis. They were of the opinion, moreover, that it was impossible that the woman could have inflicted those lesions upon herself. The commission of inquest, not being satisfied, consulted the Council of health, who came to the conclusion that the laceration of the recto-vaginal septum and the protrusion of the uterus through the vagina, might be accounted for by its expulsion from above, by prolonged efforts of the abdominal muscles.

M. Dubois, in his examination, argued that the lesions observed in this case could not have been caused by violence inflicted either by the woman herself or others; they could

only therefore, have resulted from the involuntary efforts to which she had been subjected. In fact it is well known, at the present day, that retroversion in the early period of pregnancy may be independent of all external injury: and in this instance being augmented by the laborious occupations of the patient, by the pressure it caused on the perinæum and rectum, expulsive efforts of the abdominal muscles were provoked to such a degree as to rupture the soft parts of the pelvis. Baudelocque reports a case which goes to strengthen this explanation, in which the retroverted uterus excited involuntary contractions, and was made to depress the posterior wall of the vagina and project at the entrance of this canal, and in which a slight additional effort or force, perhaps, would have produced the same lesion as in the case of M. Mayor. It must not be forgotten that the portion of peritonœum on which the uterus reposes when retroverted, has no other support than the posterior wall of the vagina, against which it is urged by expulsive efforts that have been known to rupture much more solid and resisting parts. Thus a case is related by Monro, where such efforts ruptured the uterus and belly below the umbilicus, and the fœtus escaped through the opening, which afterwards cicatrised rapidly."

On the Puerperal Fever which prevailed in the Lying-in Hospital at Kiel, from September, 1834, to March, 1835, and during the Winter of 1835–6; and on the Treatment by Ice. By Dr. MICHAELIS.

Until the year 1834, this institution had been almost entirely free from puerperal fever, at least in a malignant form. The situation of the building is very far from being favorable, nor does the arrangement of the wards, &c. appear to be much better. The chief cause of the complaint must be considered to be of an epidemic nature, because, previous to its appearance in the hospital, Dr. M. had seen several cases in private practice; although otherwise it is not frequently witnessed in the district. Several were fatal cases. It is remarkable that each appearance of the disease in the hospital had been preceded by the death of a patient from difficult labor. This was not only the case in the two last epidemics, but also in 1819 and 1830, when an unusual mortality followed similar fatal cases. The contagious nature of the disease was but too evident, and the rapidity of its action

almost incredible. Several women, perfectly healthy, came into the hospital in labor, and were scarcely delivered before the disease burst out in full activity. The contagious nature of it was further proved by its resisting every attempt to arrest its progress, until the whole building had undergone a thorough purification and refurnishing. With regard to the mortality, this varied very much, according to whether the patient was attacked immediately after labor, or not until several days had elapsed. In the first case it was very fatal, in the other never. The ovaries appeared to be the chief seat of the disease, and where the pain was first complained of. Abscess of the ovaries and suppuration of the veins were observed in several cases.

The most constant symptoms were anxiety in breathing, from complete inaction of the abdominal muscles; hence the laborious heaving of the thorax, the extreme rapidity of the pulse, at one moment full, at another small; sleeplessness, and the local symptoms of the affection. Diarrhœa alternated with constipation; occasional vomiting and tympanitis. The profuse and reeking perspirations, and the early appearance of diarrhœa, were not critical; whereas, diarrhœa at a later period seemed to form a decided crisis, and was often exceedingly profuse. Dr. Michaelis observed, as a remarkable fact, that the features of the patient, till the last moment, underwent but little alteration, except that there was an expression of anxiety; she remained conscious to the last; and in most of the fatal cases there was no appearance of delirium.

The treatment required to be varied. Where the disease appeared after the third day, local depletion with leeches, and poultices, were the chief treatment. Bleeding was seldom had recourse to. The secretion of milk was kept up as much as possible, and small doses of calomel internally, or neutral salts where the bowels were confined. This treatment was always effective and sufficient; but in difficult cases, where the patient was attacked shortly after labor,—viz. the first or second day,—Dr. M. found no mode of treatment of any avail in the first epidemic; not a single patient escaped. Powerful antiphlogistic treatment; calomel in small and then in large doses, smart purging, camphor, turpentine injections, &c. &c. were all equally unsuccessful in producing even the most temporary abatement of the symptoms. It was only by the use of ice that Dr. Michaelis succeeded in saving the last patient who was severely attacked during the first epidemic: it was suggested to him by M. Kirchhoffer, a student, who had seen it used at Copenhagen. Dr. M. used ice both

externally and internally. A piece of ice, of about the size of a finger, was given to the patient every half or quarter of an hour, according to her own inclination and the severity of the disease; and this was continued for two or three days. As soon as she began to dislike it, it was stopped. Externally, a very large bullock's bladder, partially filled with pounded ice or snow, was laid upon the abdomen, so that it was covered with a layer of ice an inch in thickness. As soon as the ice was melted, a fresh bladder was applied, and this was continued, according to the patient's feelings, without intermission, for seventy hours. The patients express great relief when this is applied. In some cases the weight of ice was irksome, but this may be relieved by placing some thin cask-hoops across the abdomen beneath the bladder; the weight is by this means more equally diffused. The almost instant effect produced by this application was the feeling expressed by the patient—no remedy has proved so grateful to her feelings as this; and Dr. M. never ventured to employ it without this indication.

The most remarkable change in the symptoms is of the pulse. In the course of a few hours it sinks ten, or even thirty, beats in frequency, and becomes more distinct and free. When this effect was not produced, the case generally soon proved fatal. Other changes followed at a later period,—viz. rest, and sleep for several hours, (sometimes, it is true, the symptoms will return again more violently after it, but still sleep is a most favorable symptom;) cessation of vomiting; return of peristaltic action; after a time the bile again appears in the evacuations. The distended state of the abdomen diminishes, partly from the astringent effects of cold, and partly from discharge of flatus. A profuse watery diarrhœa soon comes on, which appears to be the first effort towards convalescence: this occasionally proceeds to a great extent, but is nevertheless very beneficial. Dr. M. thinks that the powerful application of ice is capable of producing absorption of those immense effusions which take place in the abdominal cavity. In some cases he observed violent pains in the shoulders after the application of the ice, and at a later period, during the patient's recovery, a variety of rheumatic and catarrhal affections; but they were of no serious importance. Dr. M. used no internal remedies in conjunction with the ice. Leeches applied upon the most painful spot, and free venesection, were now of service; whereas this latter, when used at an earlier period, seemed only to accelerate the fatal termination.

The two following cases we select as a specimen of this treatment and of its results, not because they were successful,

(for Dr, M. has recorded some fatal cases where ice was employed.) We have selected these two because, from the peculiar circumstances of the case, the exhibition of ice was tried more fairly than in some of the unsuccessful ones.

Case I. A robust primipara was delivered on the 12th of January, 1836, after an easy and natural labor. She had an early and abundant supply of milk. On the 14th, (third day after delivery,) she was seized with violent pain in the abdomen, preceded by a rigor, and the uterus became very tender to the touch. Twenty leeches and the internal exhibition of ice-pills (*eispillen*,*) relieved these symptoms in twenty-four hours.—Jan. 19. Had another rigor and a return of the abdominal symptoms. Pulse 120; great depression of spirits, although otherwise of a remarkably cheerful disposition. Twenty leeches were ordered, and ice-pills.—Jan. 20, (second day of the attack.) Much the same. Still plenty of milk. Bowels opened six times. Repeat the leeches and ice-pills.—Jan. 21, (third day.) Innumerable evacuations; pain less, milk diminished; pulse 100. Continue the ice.—Jan. 22, (fourth day.) Feels well, except that there is a small spot on the left side of the uterus, which is still painful. Omit the ice.—Jan 23, (fifth day.) Convalescent; the diarrhœa continues nevertheless. The milk has disappeared, the child having died from aphthæ. The diarrhœa continued profusely until the 29th of January; it then ceased of itself, and the patient's appearance was very good for some days. In the beginning of the following month, she was attacked with inflammation in the veins of the left leg; the veins being hard and excessively painful along the whole limb, but with little fever. Friction with unguent. hydr. ciner. was used until a slight degree of salivation was produced; the symptoms abated, and she left the hospital in good health on the 14th of February.

Case II. A young woman, æt. 20, in her first pregnancy, who had been under medical treatment (viz. was bled,) a fortnight before on account of bronchitis, was delivered of a healthy child, after a labor of five hours' duration, on the morning of Jan. 27, 1836. The pains were weak, and, although she had recovered from her attack, yet, as she appeared still delicate, she was delivered in bed. The placenta quickly followed the birth of the child, and she felt perfectly well.

Jan. 28, (first day of the attack.) No sleep during the night. After a shivering fit, she was seized with heat, quick breathing, much anxiety, violent thirst, and vomited twice.

*Quere: were these little pieces of ice swallowed, or allowed to melt in the mouth? We must presume the former.—Rev.

In the morning, the pulse was 112, full; the abdomen exquisitely tender. Sixteen leeches were applied to the abdomen, followed by poultices; cold water for her drink. Towards evening the symptoms were worse, except a very transient alleviation of pain by the leeches. Iced water; and, at seven o'clock P. M., ice was ordered to be taken every half-hour, and an enema. The pulse had risen to 120.

Jan. 29, (second day.) Very restless during the night; violent pain; three copious feculent evacuations. Towards morning, she slept for two or three hours. At noon, the pulse was 140, full, and hard; determination to the head; the abdomen intensely painful, and already tympanitic; bitter eructations, followed by vomiting of a bitter watery fluid. Let her have ice every quarter of an hour, and be bled to twenty ounces. Towards evening, sixteen leeches were applied to the epigastrium, which had become painful; after which she slept for two hours, during which the pulse fell to 116, soft, and full, with general perspiration.

Jan. 30, (third day.) Has had a bad night. Vomited four times, during which she threw up two worms alive. Bowels open twice. Violent burning pain in the abdomen; vertigo; painful eructation; hiccup; abdomen immensely distended; tympanitic. Pulse 132, full and hard; reeking perspiration; feels that she is dying; much depression of mind. V. S. ad deliquium, (℥xvj.) Dislikes the ice, which is therefore stopped. At noon, pulse 132, soft; much anxiety. A large bladder, with snow, was placed over the whole abdomen, (from the scrobiculus cordis to the pubes,) and repeated every half-hour. The application feels very grateful. At her earnest request, she was allowed iced beer for her drink. The favorable effects of this treatment soon manifested themselves: the painful eructations and hiccup ceased, and she had a copious evacuation of whitish grey fæces. Calm sleep for several hours followed; the breathing became deep and quiet; the pulse fell to 108, full and soft; sense of burning diminished.

Jan. 31, (fourth day.) Her night was good until three o'clock, since which she has been restless, has vomited three times, throwing up a quantity of dark-green bile and two more worms. Has passed involuntarily several grey fluid stools. The abdomen was nevertheless not so painful at its lower part, although more distended: on percussion here, it had entirely lost the intestinal sound, *and fluctuation could be distinctly felt.* It was evident that fluid was already extravasated into the abdominal cavity, confirmed by the temporary remission of the symptoms. Much tenderness above the umbilicus; pulse 120, small, hard, compressed. The day fol-

lowed without any material change. She vomited once a quantity of watery fluid, and another worm. Several watery grey-colored stools were passed involuntarily. Hitherto, during the whole course of the attack, the child had been regularly applied to the breast, and appeared to obtain milk, although the breast was somewhat flaccid. The lochia had entirely ceased. The expression of her countenance was still tolerably good.

Feb. 1, (fifth day.) She passed a good night until four o'clock, dozing. Very frequent evacuations, for the first time of a yellow color, showing that the peristaltic motion had returned. Violent stitch in both shoulders. Abdomen somewhat less; fluctuation disappeared; epigastrium less painful. It was attempted to leave off the application of ice to the abdomen, having been persevered in for forty-hours; but she had scarcely passed an hour before the burning sensation in the abdomen returned, with painful eructations and anxiety; the ice-bladders were therefore again applied, and repeated every hour. The day passed favorably. She dozed a good deal, passed some flatus and innumerable involuntary evacuations. Pulse 120: in the morning it was small, hard, and compressed; in the evening soft, somewhat empty, but less compressed. Features sunken. She expressed a wish for lemon-juice and water as a drink.

Feb. 2, (sixth day.) Passed a good night until three o'clock; after which was restless, and complained of pain in the right hypochondrium, which is distended and hard. Innumerable evacuations passed involuntarily; has an expression of suffering; pulse 120, hard, small, and compressed. At noon she wished to leave off the applications of ice, which had been continued, with a very short interval, for three days. Eructation followed, and the pulse rose to 128; the evacuations contain dark green bile.

Feb. 3, (seventh day.) The evacuations ceased during the night; this was followed by restlessness and sensation of burning. Ice was therefore again applied twice, and this was followed by green evacuations, and quiet. In the morning she felt tolerably well; her spirits have returned. The abdomen is almost entirely without pain on pressure, and but slightly distended. Pulse 120, hard; otherwise good. She expressed a wish for stewed prunes (*Pflaumen suppe*,) with lemon juice, which she took with relish. Since yesterday the breasts have become somewhat larger; the lactiferous tubes may be distinctly felt. In the evening, after putting on clean linen, she felt comfortable. Her only complaint is of hunger. Has passed the first voluntary evacuations for the last four days; they are still frequent, but less copious.

Feb. 4, (eighth day.) Feels well. Evacuations, although frequent, are now again feculent; pulse 110. At nine in the evening, the burning sensation in the abdomen suddenly returned, with anxious breathing, during which the thorax alone acts, the abdomen and diaphragm being perfectly motionless. Sensation of suffocation; pulse 128, hard, and suppressed; the look is vacant, with slight strabismus. At half past ten a bladder was applied to the abdomen, which immediately relieved every symptom.

Feb 5 to 9, (ninth to thirteenth day.) On the whole she continues to improve. Sharp pains in the abdomen continued to appear occasionally; for which fomentations of brandy, and afterwards washing with cold vinegar and water, seemed useful. Hitherto the bowels had been opened more than six times every day; when this was not the case, she did not feel so well. The fæces and urine generally pass involuntarily, and sometimes unconsciously. The urine now resembles milk, slightly tinged with blood. Although the tongue is brown and dry, her appetite is tolerably good, and she has taken some bread with the prunes. Pulse still 110. Although the nipples are very sore, she continues to suckle her child. Has taken no medicine, as nature was evidently capable of effecting the process of absorption. The condition of the abdomen, as also her former symptoms, leave no doubt as to the existence of extensive effusions of coagulable lymph. At a later period these could be felt distinctly.

Feb. 10 to 16, (fourteenth to twentieth day.) The milk has disappeared; she improves slowly; her appetite has not yet returned. Excretions, for the most part, are natural; two or three evacuations daily, increased in quantity. Occasional inability to pass water; slight cough.

March 10. Was discharged. Still weak, and with distinct indurations here and there in the abdomen. This was carefully examined about the end of February, when adhesions of the bowels were distinctly traced, under the form of hard compact tumors. These filled the whole abdominal cavity below the anterior and superior spinous process of the ilium; an indurated mass, as large as a fist, could also be felt beneath the right lobe of the liver. Towards the end of the month she suffered frequently from vomiting, diarrhœa, and want of appetite; the urine became as thick as milk, and during this state the indurations became much softer; that of the liver alone could be felt when she left the hospital. As these attacks of vomiting seemed evidently a part of the sanitory process of nature, especially as the pulse always became more quiet, no medicine was given to stop it: the abdomen was

well covered with flannel, and frictions used with volatile liniment.—*British and Foreign Medical Review.*

Case of Cæsarean Section, performed with success for the fourth time on the same Individual. By Dr. Michaelis, of Kiel.

An account of the three preceding operations, and of the case generally, is given in our second volume, p. 270. The first operation was performed in June, 1826, the woman being then in her twenty-ninth year; the second in January, 1830; the third in March, 1832. This woman became once more pregnant, and, the operation being equally necessary as before, it was performed by Dr. Michaelis, on the 27th June, 1836, after the patient had been in labor three days. The new incision intersected the second and third cicatrices, and the uterus had become so completely adherent to the abdominal parietes that the peritoneal cavity was not laid open. On the third day after the operation, the patient was threatened with alarming symptoms of peritonitis, accompanied by tympanitis, which speedily yielded to the internal exhibition of ice and a few doses of calomel. The external wound could not heal, on account of the gaping of the uterine opening, which kept apart the adherent margins of the divided skin, and thus converted the wound of both integument and uterus into a single symmetrical aperture. On the 1st of August, (the period at which the last report is dated,) the uterine aperture was rather more than half an inch in extent; and this diminution appeared to be solely dependent on the gradual contraction of the uterus, inasmuch as the healing process itself was not then contemplated. Nevertheless, the patient left her bed daily, and her general health was good. She herself suckled her child, which was thriving well.

[An interesting point connected with this case is the occurrence of peritonitis after the fourth operation, in which instance alone, it will be remarked, the serous sac was *not* opened, and was therefore unexposed to the influence of external agents, as the atmospheric air, &c.

A medical friend suggests the expediency, in cases of hopeless deformity of the pelvis, that the fallopian tubes should be divided during the Cæsarean operation: in the event of a successful result to the operation, this proceeding would, of course, do away with all risk of a second.]—*Ib.*

On the Brain of the Negro, compared with that of the European and the Ourang-Outang. By FREDERICK TIEDEMANN, M. D., Professor of Anatomy and Physiology in the University of Heidelberg. (*Read before the Royal Society, June* 9, 1836.)

It has long been the prevailing opinion among naturalists that the Negro race is inferior, both in organization and in intellectual powers, to the European; and that, in all the points of difference, it exhibits an approach to the Monkey tribes. The object of the present paper is to institute a rigid enquiry into the validity of this opinion. The author has, for this purpose, examined an immense number of brains of persons of different sexes, of various ages, and belonging to different varieties of the human race, both by ascertaining their exact weight, and also by accurate measurement of the capacity of the cavity of the cranium; and has arrived at the following conclusions. The weight of the brain of an adult male European varies from 3lbs. 3 oz. to 4 lbs. 11 oz. troy weight: that of the female weighs, on an average, from four to eight ounces less than that of the male. The brain usually attains its full dimensions at the age of seven or eight; and decreases in size in old age. At the time of birth, the brain bears a larger proportion to the size of the body than at any subsequent period of life, being then as one-sixth of the total weight; at two years of age it is one-fourteenth; at three, one-eighteenth; at fifteen, one twenty-fourth; and in the adult period, that is, from the age of twenty to that of seventy, it is generally within the limits of one thirty-fifth and one forty-fifth. In the case of adults, however, this proportion is much regulated by the condition of the body as to corpulence; being in thin persons from one twenty-second to one twenty-seventh, and in fat persons often only one fiftieth, or even one hundreth of the total weight of the body. The brain has been found to be particularly large in some individuals possessed of extraordinary mental capacity. No perceptible difference exists either in the average weight or the average size of the brain of the Negro and of the European: and the nerves are not larger, relatively to the size of the brain, in the former than in the latter. In the external form of the brain of the Negro a very slight difference only can be traced from that of the European; but there is absolutely no difference whatsoever in its internal structure, nor does the Negro brain exhibit any greater resemblance to that of the ourang-

outang than the brain of the European, excepting, perhaps, in the more symmetrical disposition of its convolutions.

Many of the results which the author has thus deduced from his researches are at variance with the received opinions relative to the presumed inferiority of the Negro structure, both in the conformation and relative dimensions of the brain; and he ascribes the erroneous notions which have been hitherto entertained on these subjects chiefly to prejudice created by the circumstance that the facial angle in the Negro is smaller than in the European, and consequently makes, in this respect, an approach to that of the ape, in which it is still farther diminished. The author denies that there is any innate difference in the intellectual faculties of these two varieties of the human race; and maintains that the apparent inferiority of the Negro is altogether the result of the demoralizing influence of slavery, and of the long-continued oppression and cruelty which have been exercised towards this unhappy portion of mankind by their more early civilized, and consequently more successful competitors for the dominion of the world.—*Ib.*

Proceedings of the Royal Society, No. xxvi.

On the Employment of Tartar Emetic in large Doses in Inflammation of the Mamma. By J. C. W. Lever, Esq.

Some time since Dr. Evory Kennedy, of Dublin, recommended this practice, and in the present communication Mr. Lever relates six cases by himself, and two by Dr. Ashwell, in which it was employed with the greatest success. The general mode of administering the tartar emetic was first to give a cathartic draught containing one grain of this salt, and then giving about half a grain in a mixture every two hours. Mr. Lever is of opinion that "the patient must be *nauseated;* and this kept up for a longer or shorter time according to the state of the indurated or inflamed glands." [In using this remedy in *pneumonia*, its effect is certainly as beneficial, if not more so, when it does not nauseate. Inflammation of the mamma is so very obstinate and painful a disease, that we are pleased to receive any accession to the ordinary modes of treating it, and shall be glad to put in practice the treatment recommended by Mr. Lever.]—*Ib.*

Med. Gazette. Aug. 19.

Observations on the Advantage of Healing by the first intention the Wound in the Lateral Operation for Lithotomy. By JOHN CRICHTON, Esq., Surgeon, Dundee.

The object of this communication is expressed in its title; and it contains a report of many interesting facts confirming the views of its highly respectable and skilful author. In a former communication to the same Journal, in the year 1828, Mr. Crichton stated, that he "had already witnessed the wound healed by the first intention in five instances, the urine passing from the urethra from the commencement, and continuing to do so, whereby the cases were remarkably expedited, and much annoyance from the dribbling of the urine by the wound avoided." Since that time about forty cases have been operated on by Mr. C., and in thirteen of these "the wound adhered at once, healing by the first intention. In the greater number, however, the chylopoietic viscera being unsound, and the habit much debilitated, the attempt to heal the wound by the first intention was not considered advisable." Mr. C. concludes his paper with some severe, and we must be permitted to say, rather partial strictures on the operation of lithotrity. We recommend to his attention the very admirable and most candid essay of Mr. Key on this subject, noticed in our present Number.—*Ib.*

Edinburgh Journal. July, 1837.

Lunatic Hospitals in Turkey.

"In most large Turkish towns there are asylums for persons afflicted with diseases of the mind, called in Turkey *Timaristan*, which do the greatest honor to the heart and understanding of the people, as the management and order observed in them are much beyond the progress of civilization in other matters. These institutions are situated in the vicinity of the great mosques, and consist of convenient though not very clean cells, built round a court with piazzas in front. The Sulemanic Lunatic Asylum at Constantinople, connected with the mosque of the Sultan Suleiman, as well as that of the Sultan Selim at Adrianople, are of considerable extent. The first is a square building of hewn stone, in the Moorish style of architecture, about 180 feet in length, 160 in breadth, and one story high; the interior is divided into

two courts, surrounded by a marble colonnade, which gives admittance to the wards. The roofs are a series of cupolas, intersected by arched vaults, and the second court is embellished with a beautiful fountain.

"Lunatic hospitals of this kind, but on a smaller scale, are to be met with in every part of the kingdom, containing a hundred and sometimes even a greater number of patients. Idiots and epileptic patients constitute the greatest number; of maniacs there are but few. As persons afflicted with mental diseases are in this country held sacred, they are treated with attention and humanity, and are, in fact, in a much better condition than the inmates of many asylums among the Christians. These Imarets, or asylums, however, are often very inadequately endowed, or their resources not properly managed, and consequently it is not easy to procure at all times sufficient food for the inmates. In these cases they depend on the compassion of their fellow-believers, by whom they are irregularly fed. On no occasion does a Turk tease an idiot; he may smile at his follies, but he never leaves him without having first bestowed an alms on him."

"It is proved by experience that, the higher the point to which the cultivation of the mind has attained in a country, the more frequent are the cases of mental derangement, and that with the rising morality of a nation homicide decreases, while suicide increases; in other words, that, generally, homicide and suicide stand in inverse ratio. Turkey offers the most convincing proofs of the correctness of this statement. In a country where the mind is sunk into an incurable lethargy, —where civilization is unable to rise out of the abject degradation into which it has fallen,—many of the usual causes of aberration of the mind must necessarily be wanting; such as excessive study, deep and prolonged reflection on any one subject, and such-like. Drunkenness, which with us is so frequently the cause of deranging the faculties of the mind, is unknown among the Turks, from their complete abstinence from spirituous liquors. By marrying when very young, they are enabled to satisfy the earliest desires for sexual connexion; and their imagination is never excited by obscene pictures or reading, nor their desires prematurely called forth by stimulating food; lastly, unrequited love, which has so baneful an effect on the sensorium, is unknown in the East, as well as romantic love in general. Here the virgin surrenders without a sacrifice, man conquers without a struggle, enjoys without delicacy, and passes suddenly from eager desire to satiety."

LOUISVILLE MEDICAL INSTITUTE.

At a public commencement held in the Second Presbyterian Church, on Friday the 2d of March, 1838, the degree of *Doctor of Medicine* was conferred on the following gentlemen, who had undergone satisfactory examinations, and submitted Theses on the subjects annexed to their names; viz:

1. James Seanderson Athon, of Indiana—On Sanguinaria Canadensis.
2. John Barry, of Indiana—On Rheumatism.
3. James M. Bemiss, of Kentucky—On Bloodletting.
4. Joseph M. Brooks, of Kentucky—On Creosote.
5. Patrick H. Cochran, of Kentucky—On Dysentery.
6. Lemuel N. M. Cook, of Tennessee—A Review of the Lectures of Prof. Cooke.
7. Stephen Cooke, of Kentucky—On Digestion.
8. Samuel C. Cowan, of Alabama—On Phlegmasia Dolens.
9. William Forrester, of Kentucky—On the Fevers of Jefferson County, Kentucky.
10. Willis Wallace Goodwin, of Indiana—On Intermittent Fever.
11. Orville R. Grant, of Kentucky—On the Modus Operandi of Medicines.
12. John E. Jackson, of Mississippi—On Malignant Congestive Fever.
13. William Johnston, of Kentucky—On Gonorrhœa.
14. William Kellar, of Illinois—On Fever.
15. William C. Kindel, of Mississippi—On the use of Sinapisms in Fever.

16. John M. Leech, of Illinois—On Emetics.
17. Thomas Johnston Montgomery, of Kentucky—On Metritis.
18. Henry Murray, of Ohio—On the importance of a practical knowledge of Anatomy.
19. John E. Park, of Georgia—On Puerperal Fever.
20. Jesse H. Rodman, of Kentucky—On the Function of the Spleen.
21. John S. Seaton, of Kentucky—On Dysentery.
22. William K. Sloane, of Kentucky—On Dysentery.
23. Henry M. Wakefield, of Kentucky—On Emetics.
24. Richard C. Wyatt, of Tennessee—On Generation.

The Honorary degree of M. D. was conferred upon the following gentlemen, viz:

Samuel C. McWhirter, of Wilson County, Tennessee, and John M. Talbot, of Louisville, Kentucky.

William H. Donne, M. D., a graduate of the Medical College of Ohio, and William B. Herrick, M. D., a graduate of Bowdoin College, were admitted *ad eundem* in the Institute.

L. P. YANDELL, M. D.
Dean, &c.

Louisville Medical Institute. The number of students, in this institution, last winter was 100, including the Class on Medical Jurisprudence—and, exclusive of that Class, 80.

[APPENDIX.]

An Oration, commemorative of Laying the Corner Stone of the College Edifice of the Louisville Medical Institute, on the 22nd of February, 1838. By the Hon. GEORGE M. BIBB.

Mr. President and Trustees of the Medical Institute,
Mayor and Councilmen of the City,
and fellow-citizens of Louisville:

The corporation of Louisville, is a species of government within a government, more especially charged with the internal police of the city, the well-being of the inhabitants and sojourners.

The city has founded and endowed the Louisville Medical Institute: and we have this day witnessed the ceremonial of laying the corner stone of the edifice.

Invited by the President, Trustees and Faculty of the Institute to address you on this occasion, I propose to offer some thoughts,

In the first place, upon the general laws of Nature, the observance of which tend to the prosperity, happiness and duration of cities as well as States; the neglect of which produce misery and destruction:

Secondly, upon the dangers to which Louisville is especially exposed according to those immutable laws of nature:

Thirdly, upon the safe-guards against those dangers:

Fourthly, upon this day of celebration:

Lastly, upon the importance of this Medical Institute, the advantages of this location, and the effect of this establishment upon the destiny of this city.

By Nature and Nature's God, the self-existing benevolent producer of all things, man has been compounded of matter

and mind, and placed upon this earth, to perform his part in the system of the universe.

He is subjected, by the very nature of his being and composition, to certain general laws of universal obligation, from which he cannot escape, nor divest himself: they adhere to him individually; they follow him into society; they surround and act upon all individuals, communities, nations and potentates, like the atmosphere which we breathe: they are stamped upon the being of man as the immutable laws of his nature and happiness.

Composed of matter man is subjected, in that, to the general laws of matter, to the action of the material elements, to wounds, diseases and dissolution.

Composed of mind he is subjected to certain moral laws resulting from the nature and the capacities of intellect, and the sum of the faculties of mind, with which he is endowed, the purposes for which they were bestowed, and the accountability therefore to his creator and giver, who is in himself an intellectual essence of perfect moral excellence.

Man was not formed for a mere selfish circumstance; not like an individual of the vegetable kingdom, not a monochord; but for society, and for benefitting his fellow-men. Like a full stringed instrument, he is capable of melody, sympathy, harmony, and of discord too; it is the province of mind to arrange the parts, and regulate the movement, to the end that concord may be effected. The condition of his existence, his wants, his infirmities remind him continually of his dependence on others, his claims upon them and their claims upon him. In childhood he is helpless and in his nurse's arms; in manhood bold, adventurous, forming schemes of happiness, of love, of friendship, of fortune, and of fame; in old age he is again dependent on the good offices of his kindred and friends. From his first to his last breath he stands in need of the services of his fellow-men.

Some there are, whose powers are better adapted to bodily labor, others to intellectual pursuits; and even there, some are better fitted for one department of science and some for another. The females formed with delicate beauty and

grace, adorned with retreating diffidence and bashful modesty, are not designed by nature for laborious exercises, but to act their parts within doors; to grace the fire-side, to console, enchant, and render home delectable.

Manual labor produces subsistence, and the implements, fabrics, and materials for interchange and commerce. Intellectual cultivation tends to increase the sum and variety of production, by directing labor right, saving unnecessary toil and time, and producing more perfect fabrics. Muscular labor and mental labor stand in need of mutual aid and co-operation. Manual labor, the arts, the sciences, are all connected by indissoluble ties. The sailor and the helm are instruments for navigating the ship; and they must be governed by the skill of the pilot for effecting safe navigation. So of all other occupations: the laborers and tillers of the earth, the artificers, the artists, the cultivators of intellect and morals; from the poorest to the richest, from the peasant to the chief magistrate, all, all are mutually connected constituent parts of one whole or system of society. All are mutually useful, the one to the other, and co-operating in the long series of labors, bodily and mental, by which the order, peace, happiness and stability of the community are to be accomplished.

It is the province of intellect to trace the sources of these dependencies, the moral causes and effects, influences and benefits, the nature and extent of those mutual obligations upon individuals, families, communities, states, nations and potentates.

By tracing these moral causes and effects, it is demonstrated that individual is morally bound to individual, family to family, community to community, and nation to nation by certain social duties and natural obligations, in the great system of production and exchange, so that their respective products of body and mind, of nature and art, may be sent around the world in exchange for all the luxuries of nature and art, and the elegancies of genius and science which the world supplies.

The God of Nature has willed that man should be distinguished from all other animals; and that this characteristic distinction should be in superiority of intellect; marked by turning his eyes to heaven, by a power of speech not limited as in other animals, but capable of communicating his thoughts, his moral feelings; of describing his researches and discoveries, of embodying the operations of his mind and handing them down to posterity.

Men are made by nature, not only for society but for civil and political government also. Without these, man could exist as a savage only, but could never attain that improved happier condition to which progressive intellectual cultivation is constantly tending.

This progressive intellectual improvement and happiness, depends in a great degree upon the good or ill administration of the civil and political government of each particular community, State or nation.

That government is most conducive to those great ends of intellectual improvement and increased happiness, when the administration, that is to say, the directors and managers of the body politic, are practically identified in interest and feeling, with the great body of the members of the commnnity. The government is abused and perverted when the power of a majority, oppresses the particular interests of a minority, by partial burthens and exactions to benefit the particular interests of the majority. It is more especially abused and wickedly perverted, when the directors and officers of the body politic, draw a line of distinction between the government (that is themselves) and the people; make the government one body and the people another, and provide for the government to the neglect of the people; thereby producing the abomination of a government as an antagonist body to the body of the people: the government providing for itself (i. e. the rulers) and devouring the substance of the people. By such perversion the government, a body politic, created by the people for their safety and general welfare, becomes a natural body composed of the rulers and office-holders, distinct

from the people, exalted above their creators, using the people as if they were the property of the rulers. By such perversion and breach of trust, those appointed and trusted to be the shepherds become the wolves and devourers. Such doings belong to the antiquated doctrines, that kings ruled by divine right; that the multitude were born to be the hewers of wood and drawers of water for their rulers; that a precious noble few are born "booted and spurred prepared to ride over the multitude by the grace of God." Such false notions have been exploded by the progress of reason and Science. True Philosophy has established and proclaimed the principles engrafted into our Declaration of Independence, and the bill of rights of the State Constitutions; that the people are not the property of the government, but its Creator; that government is instituted by the people for their benefit and happiness that the public officers are created for the advantage of the people, that public offices are but trustees and servants, not the masters, of the people.

Government is a moral science, and best understood by resolving it into its constituent elements and examining the component parts, their proper relations, duties and dependencies.

Cities, states and nations are composed of families; and families are composed of individuals. The elements of a family are the husband, the wife, the children and the servants. The comfortable subsistence and happiness of a family, require subordination, order, and distribution of the parts which each is capable and fitted to perform in relation to the end. This is good management or economy. As the government of a city includes many families, order, distribution of the parts, subordination and economy are necessary to the comfortable subsistence and general welfare, which is the end and aim for which government is instituted. In this association of families under political government, the laborer, and the philosopher, the artificer and the merchant, the muscular action, and the mental action, are all necessary, mutually acting and re-acting upon the several parts; and by good or ill management produce happiness or misery, stability or dis-

solution. The rich and the poor must perform their respective parts. Neither wealth, nor power, can dissolve the mutual dependence, moral duties and obligations which nature has ordained and established between man and his fellow-man.

"Let not ambition mock their useful toils
"Their homely joys, and destiny obscure;
"Nor grandeur hear, with a disdainful smile,
"The short but simple annals of the poor."

The rich to-day may be poor to-morrow. The poor by industry and frugality may become rich. The proud may be afflicted by disease, or unforeseen casualty. No family knows how soon the social duties and kind offices of the fireman, the nurse, the physician, or the sexton may be in requisition.

Solomon, who inherited forty-six thousand tons weight of silver and of gold, with vast materials of value for building the temple, together with a kingdom of great wealth and power; the wise, the favored of God, was not exempted by all these from the general laws of nature. He became enfeebled and dependent upon his fellow-men to seat him upon his throne.

The mighty Cæsar, the orator and the historian, the conqueror of his country's enemies, and of his country's liberty; who did bestride the world as a Colossus, had a fever when in Spain;

"'Tis true, this God did shake—
"His coward lips did from their color fly,
"And that same eye whose bend did awe the world
"Did lose its lustre: I did hear him groan:
"Ay, and that tongue of his that bade the Romans
"Mark him, and write his speeches in their books
"Alas! it cried, give me some drink Titinius,
"As a sick girl."

Let no man presume upon his wealth or his power to hold himself independent of his fellow men, nor treat unmercifully, a bold peasantry, their country's pride. The abuse of greatness is when it disjoins mercy from power.

A city or community is deeply interested in the due performance, by all its members, of their respective parts. The

honest cobler who performs his duty faithfully, is more worthy in the eye of reason, than the selfish politician who sacrifices his country's good to his own sinister purposes, or in the servile obedience to the discipline of party jugglers; and far more worthy than the partial or corrupt judge.

"Honor and shame from no condition rise,
"Act well *your* part, there all the honor lies."

Governments have their moral tendencies and their evil tendencies. The latter are to be particularly watched and fenced against.

In republics, the evil tendencies are visible sooner or later, according to circumstances. A superabundance of productive industry, upon which an active commercial state of society is founded, has a tendency to divide society into three classes, first, men of great wealth, secondly, men of abject poverty, thirdly, men enjoying a happy mediocrity between these two extremes.

Great wealth, like excess of strength, if not controlled by intellectual and moral cultivation, disdains the dictates of propriety, and the authority of reason, and produces insolence; abject poverty, if not under the control of intellect and morals, like excessive weakness and deformity, sours the temper and begets baseness. Insolence and baseness are the ordinary sources of disorders in the body politic: the one running into every species of audacious guilt in indulgence of the animal passions, the other sinking into every kind of fraud and low mischief. In such a state of population the security of the community consists in having a sufficient number of men, whose condition and morals, render them averse to wrong and injustice; so that they may prove too powerful for either of the extremes, or for both combined. When this intermediate class, which balances and regulates the machinery of government, either does not exist in sufficient number, or existing, is deceived by demagogues, an outrageous democracy takes place; an irresponsible government by the physical force of numbers, the oppressors of virtue, and munificent rewarders of vice, the confiscators and plunderers of property and vested rights; constituting in all

"that worst of tyrants an usurping crowd." The established magistracy and every regular function of the constitutional government becomes enfeebled, perverted or abolished; the men who have effected the change become masters of the commonwealth, "until this brutal force is overwhelmed in its own fury."

To this evil tendency the city of Louisville is liable in a very eminent degree, because of her local position, the natural advantages which she possesses for extended and profitable commerce, now well grown and increasing; because of the present large population compressed within her limits, hereafter to be greatly increased in numbers and density, as well stationary as sojourners and itinerants, boatsmen, deck passengers, and idlers without means, who from laziness, bad habits, and poverty, are to be subsisted, honestly or dishonestly, upon the property and industry of the resident population. Let us profit by the experience which history has afforded at so cheap a rate to us, and applying that wisdom to the circumstances in which we are placed, avoid the catastrophe to which the evil, if not guarded, inevitably tends.

Other evil tendencies of a republic there are, which need not be particularly recited at this time, because they, in common with those recited, spring from one common cause and require the same remedy.

The primary cause of the diseases of the body politic is in the loose indulgence of the animal appetites and passions, to the great neglect of intellectual and moral cultivation.

Man as an animal has appetites and passions in common with other animals: but being endowed with superior intellect and capacities, he is capable of being the best or the worst of animals. Softened by the offices and duties of social life; tamed and subdued by intellectual cultivation and sound morals, to the dictates of justice and virtue, he is the noblest; but rude and undisciplined he is the very worst of animals. Armed with intellect, craft, courage, and superior means, if unsubjected to morality and to justice, man will wickedly pervert his superior means, and become cruel and abominably shameless in the indulgence of his appetites and passions and the

most impious of monsters. For what is more detestable than armed cruelty, immorality, and injustice. But justice and morality are the foundations of political society, and especially of a republic. Laws are instituted to declare what is just, and it is the duty of government to provide effectually all proper means to have the laws obeyed and executed.

Ignorance, animal appetites and passions are the poisons; the remedies consist in intellectual cultivation; in knowledge, science, and morals; so that the body politic be subjected to the government of reason, to the judgment of mind, to the dictates of virtue. The purest happiness is the reward of a virtuous life.

According to the rule prescribed by that intellectual moral essence who created man and compounded him of matter and mind, it is the province of mind to command, and the province of matter to obey. Such is the order and economy of the constitution of man, necessary to be observed by all men who desire to excel other animals, and not, like them, to spend their lives "prona et ventri obedientia," ("prone and obedient to appetite.") If some men so act as that the body seems to command the soul, such have perverted the order of nature and are grossly depraved. For such perversion and disobedience, nature has inflicted the sting of disease, disgrace and misery. An individual man may be considered as a little community, consisting of his mind and the various members of his body. The proper health and happiness of this little community, depends greatly on the observance of this law of nature, that mind shall govern matter, that all the parts and members of the body shall perform their proper functions in due subordination to the sway of reason. But should the subordinate parts of the body rebel, usurp authority, impeach and dethrone reason, the order of nature would be subverted, and this little community of a human body would fall into disorder, disease and ruin.

So the greater community of a city, or a state, being a collection of individuals associated under a political government, instituted with intent to provide for the good order and general welfare of all the members of the community, the same

ordinance and law of nature, requires that mind shall govern; that the administration of the constitution and laws shall be committed to public officers of intelligence and virtue. Men ignorant, licentious and knavish can no more accomplish the proper end and aim of a government instituted to establish justice and promote the general welfare, than the happiness of a single individual could be accomplished, were he to surrender his soul to be commanded by the gross and blind appetites of his body.

As in our government the great body of the members of the community, participate in the elections, and through them, mediately, in legislation, in appointments to all public officers; as from the body of the people, all these officers are to be elected and appointed, it is of the very first importance that the great body of the people should be educated, so that they may perform their parts wisely at elections, by choosing those best qualified, and so that the community may be supplied with a sufficient number of men, worthy by their intelligence, virtue and fitness to fill the public offices.

In politics, we ought to begin by operating on the intellectual faculties of man, on his moral powers, on his mind. Youth is the season for subduing the animal to proper discipline; to cultivate the mind, to inculcate virtue, to establish good habits. "Just as the twig is bent the tree inclines." "Train up a child in the way he should go, and when he is old he will not depart therefrom."

A republican government is founded on the principles, that the people are capable of understanding their rights and duties; that they have virtue to support and maintain them; that they are capable, through the medium of representation, to govern themselves. Such a government cannot exist, usefully, and permanently, unless supported by intelligence and virtue in the general mass of its citizens. History abounds with examples of popular governments which were comparatively ephemeral, for want of sufficient intelligence and virtue in the people. We need go no further than to the broken fragments of the republics attempted in Mexico and South America now groaning under the miseries of ignorance

and misrule. Demosthenes, interrogated as to the first, second and third requisites of an orator, answered, action; action; action. Were I interrogated as to the first, second and third requisites for the success of the republic, I would in the honest conviction of my judgment, answer, Education; Education; virtuous Education.

A system of education should include schools in small and convenient precincts, wherein the rudiments of language, arithmetic, mathematics, geography, natural and moral philosophy and astronomy, could be acquired conveniently by every youth; with a University at some proper point, embracing the whole circle of science. Every government stands in need of men of the first order of intelligence, skilled in the laws of nature and of nations, in the rights of peace and war, in the comities due between nations, in the great intercourse of the human family.

That which a government stands in need of for its proper efficacy and durability, should be provided for by the government. Kingly governments have provided for the machinery of royalty. Oligarchies have provided for the aristocracy. A mixed government, composed of Kings, Lords and Commons takes care to provide for the machinery of royalty and the nobility; leaving the Commons to be pensioned by the prime minister to do the King's service. The spirit of such governments is breathed into the enactment and construction of the laws. The spirits of the people are subdued by habit, fraud, or force to submit.

A republic should consult her spirit, her elementary principles, her machinery and wants; and provide by law for a due supply of aliment. Education, virtuous education, alone can supply the aliment of a republic. Education can raise the genius, mend the heart and make mankind in conscious virtue bold.

Education, the arts, sciences and morals, can raise a city to greatness and renown: can exalt a commonwealth above her sister States, and impart blessings to the nations of the earth.

But the want of moral cultivation; accumulated wealth and power used in pride, insolence, and oppression, in gluttony, debauchery and animal pleasures; with a corresponding poverty and baseness of the many, have been the causes of discontent, weakness, bloodshed, convulsion, subjection to a grievous yoke, of disorder and dissolution. They have been the primary and secondary causes of the destruction of the cities of Sodom, Gomorrah, Admah, Zeboim; (Zoar was respited for a time by the righteousness of Lot;) of Nineveh, Palmyra, Babylon, Persepolis, Heliopolis, Thebes, Tyre, and Carthage: of the overthrow and dissolution of the Kingdoms of Sesostris and Pharoah, of the Roman, Mexican, and Peruvian empires. Such causes proceeding from the want of knowledge, science and morals, have subjected nations to obscurity and obloquy, characterized them in history under the reproachful appellation of Goths, Vandals, the "Dark Ages"—the "Barbarians," the "Savage Tribes."

The history of the rise, progress and downfall of nations, the gloomy and crumbled monuments of former opulence and splendor, which cities, now desolated, once possessed, ought to impress upon the mind these truths: that indulgence of animal appetites, to the neglect of mental cultivation and virtue, is a perversion of the order of nature, contrary to the purposes for which superior intellect was bestowed on man: that such perversion of the immutable laws prescribed to matter and mind by the creator of all things, have produced and will produce in the course of nature, sooner or later, the curse, dissolution, and destruction of cities, nations and empires.

The Legislature of this State by a recent enactment have provided out of the public treasury, and by voluntary taxation for support of a system of Education in convenient precincts throughout the State. The details of the act, the arguments urged in support, the votes it received from the representatives of the people, and its enactment into a law, are circumstances to be hailed, as evidences that the public sentiment is awakened to the intrinsic value of Education; as well as to the important bearing which it has upon the order, happiness,

fame and destiny of this Commonwealth. This source of gratulation is heightened also, by the kindred feelings manifested so eminently to-day, by the citizens of Louisville, and of the country, who in number and in heart have hallowed the ceremonial of laying the corner stone of the Edifice of the Louisville Medical Institute. These are happy presages of a new era of mental cultivation in this State, and of the literary fame which, by enlarging and perfecting her institutions, Kentucky will superadd to her chivalrous deeds.

The ceremonial of laying this corner stone, is connected on this day and its annual return, with another grateful, joy-inspiring event. This day is the anniversary of the birth of Washington: first in war; first in peace; and first in the hearts of his countrymen. His fame is indissolubly connected with the war for our independence with the mother country, in resistance to the injustice and oppression, which an audacious, insolent blind ministry attempted to rivet upon the colonies; vainly boasting that the war should be prosecuted until the colonies were humbled and prostrated at the footstool of the British throne. The result proves how blind this ministry were to the moral laws of providence; how little they understood of the patience, perseverance and gigantic energies of a people who understood their rights and were in conscious virtue bold; how little of the genius of Washington, and of the moral grandeur to which he would conduct such a people, who had chosen him for the general of their armies.

His fame is united to the establishment and acknowledgment of our Independence: with the more perfect union of the States under our federal constitution.

His fame is co-extensive with the Earth; more towering and durable than monuments of brass or marble; spotless and ever during as virtue. His good deeds live after his body is interred. His precepts and example are treasures to his countrymen and to the whole human family. His deeds and those of his compatriots have obtained the gratitude of millions, and will obtain the gratitude of millions yet unborn. His example stands on high, as a pillar of light,

to conduct virtuous ambition to true glory, and nations to the true temple of liberty.

The ceremonial of laying this corner stone seems to be an opportune occasion for offering some considerations upon the importance of such an Institute; the aptitude of the location; the effect which the Institute is destined to have on the city of Louisville.

The importance of Education in general has already been considered. The importance of education in the healing art is the subject now to be particularly considered.

The Science of Medicine considered as a whole, includes—1st, Anatomy, or the structure of the human body, in all its parts, members, subdivisions and integuments, their connexions and sympathies—2nd, Physiology, or the doctrine of the constitution of the works of nature—3rd, Pathology, or the distempers, with their differences, causes, and effects, incident to the human family—4th, Surgery, or the art of curing by manual operation—5th, the practice of physic, or the treatment of the various distempers, to effect the cure—6th, Chemistry, or the process by which the different substances found in mixed bodies are separated—and 7th, Materia Medica, or the medicinal substances, their qualities and virtues, their use, singly, or mixed—within these respective spheres, the science of medicine looks to all wounds, fractures, dislocations; eruptions, obstructions and fevers; in short to all maladies external and internal, which this mortal coil of man is heir to, their localities, causes and remedies.

This recital alone, it would seem, was enough to make reasonable beings understand the very great importance of the science of medicine; and the deep stake, which families, communities, and indeed the whole human race, have in being assisted, comforted and protected by a competent number of men of science and experience in the healing art.

From time immemorial science in Medicine was considered of very great value, and those who had attained it, were held in very high admiration.

Æsculapius after his death received divine honors, because of his skill in the healing art. The ancients attributed his

parentage and his education in that science, to the gods. His daughter Hygeia was held in great estimation and after her death was venerated as the goddess of health.

The accounts of the father and the daughter are mixed with much fable, but stripped of the fabulous and rightly understood, serve to shew that the ancients were deeply impressed with the importance of skilful prescriptions and good nursing to the sick: with the truth that great science in the medicinal art could be attained only by education of a very high order, was worthy of the highest honors. Yet this science as known in those days, compared with the improvements in the various departments known at the present day, may be said to have been then in its infancy.

The interesting worth of science in medicine, addresses itself to our most important interests, our tenderest affections and sympathies: it comes home to our fire-sides. The mother bending over her sick child, feels but too keenly its importance. And whilst anxiously hoping for the success of the prescription, the tear starts in her eye, at the suggestion of her own imagination, that the discriminating powers of the physician may, perhaps, have mistaken the disease or the remedy.

Families have a deep interest that their prop and support shall not be snatched from them, and sent to an untimely grave by defect in the science of medicine.

Cities, communities and nations have a very important and continuing interest in the services of their useful and distinguished citizens, and that they shall not, in the full tide of their usefulness, fall untimely sacrifices to ignorance and empiricism in the healing art.

Pilgrimages are annually made to surgeons and physicians of renown. It ill becomes a city or State to trust alone to foreigners, for the protection of interests so dear to themselves and to the whole human family. They owe it as a duty to themselves, to benevolence, and to the great human family, to contribute their respective co-operations to the advancement and dissemination of the lights of medical science and knowledge.

This science must be wooed and won by study, diligence, patient investigation, discrimination and experience: by interchange of instances, treatments and results, amongst the learned in the profession.

One mind may attain greater science and experience in one department, another mind in another department; and so by mutual communication, aid and interchange, the best possible certainty and perfection in all the departments may be accomplished. No one mind of itself, unassisted, is capable of accomplishing such a task. The science is too vast and exalted, the range too extensive, the facts, results and deductions from them, are too various and complicated: the task requires the experience of successive generations, each successive generation profiting by the experience of those who have preceded.

Since the great Bacon introduced, (in the seventeenth century) the true method of interpreting nature, and the advancement of human knowledge, by the accurate collection of facts and instances, and by sound and genuine induction from them to discover truth, and so from one discovery to others, great progress in truth and human knowledge has been made. The science of medicine has profited greatly by this inductive method and more particularly in the present century. The progress in the science of medicine advancing now by the induction of truth and certainty of demonstration, from facts, instances, experiments and results, may be classed as one of the exact sciences. But much remains yet to be effected. New varieties, and even new characters of diseases, are making their appearance and marching from continent to continent (the Asiatic Cholera for example;) requiring new experiments and results, to ascertain the speediest and most effective remedies. The science of medicine is infinite, its advances towards perfection are progressive. Infinite wisdom belongs only to the infinite intellectual first cause of all things. Nevertheless it is the duty of man to exert his faculties to attain the highest possible reach of human knowledge and science, because, in so doing, he the better fulfils the purposes for which he was endowed with supe-

rior intellectual powers; increases his own happiness; and the more resembles, the perfect intellectual moral essence, his creator.

The Location of a Medical Institute at Louisville is peculiarly appropriate, justified, and demanded by considerations of the highest importance, to the utility and success of the Institute, to the city and to humanity.

Nature has said there shall be a great city at this point; legislatures have said there may be cities at other places.

Louisville is situated in the great valley of the Mississippi, abounding in the treasures of nature, in the earth and upon its surface, and in the bounties which fertility of soil and variety of climates offer to the industry of man. It is on the fair Ohio at the great rapids or falls of this river, in latitude thirty-nine degrees six minutes North. These falls divide the navigation of the Ohio into the upper and the lower, assigning the respective divisions to vessels of different classes and capacities, like the meeting of head and tide water in other countries, although the division is not so exact and impassable in all respects. The Ohio and its tributary streams, in this upper and northern division, wind through various latitudes, rich vallies, hills and mountains, now settled with an industrious population; and yielding by nature and the labors of man, a vast supply of surplus materials for exchange and commerce. This Northern division is now connected, in the interchanges of commerce, by means of canals with the great Northern lakes and with the cities of New York and Philadelphia, and with the North Atlantic Ocean. This lower or Southern division, by the mouthing of the Ohio into the Mississippi which mouths into the Gulf of Mexico, is connected in the interchange of commerce with the minerals and other treasures of nature and of labor and of art, of the fertile regions watered by the lower Ohio, the Mississippi and Missouri, and the other streams falling into the Gulf; with the city of New Orleans, with the trade to the West India Islands and the whole trade of the South Atlantic, and around Cape Horn into the great Pacific Ocean.

In this vast interchange of surplus productions of these two grand divisions of the upper Ohio connected with the lakes and the North Atlantic, and the lower Ohio connected with the great valley watered by the tributaries of the lower Ohio, connected with the Mississippi and Missouri rivers, the Gulf of Mexico, the South Atlantic and the Pacific Oceans; a vast amount must pass up and down the Ohio river. This break in the river and the navigation, at Louisville, renders it an important point of commercial deposite and exchange.

The city is in the heart of a fertile country; and has a great water power for machinery, now but little used, but which after times will bring into use because of its greater cheapness and security, when compared with steam power.

These advantages render this city capable of employing a very large mercantile, as well as manufacturing, capital, and maintaining a great population of merchants, manufacturers, commission agents, factories, traders and mechanics.

The resident population of this city may be now stated safely, as being about thirty thousand, and in rapid increase; the sojourning and itinerant population may be estimated as equal, annually, to the resident population; with a great profitable commerce now carried on and growing with the increase of population and surplus products of the upper and lower countries.

The employment, capital and commerce corresponding with the natural advantages of position and with the population stated, are visible, in the flat boats and steam boats in port; at the wharfs; commission houses; warehouses; factories; work shops; the wholesale and retail stores; the hotels; and boarding houses; in the streets; and in the large amount of money daily paid in and out, at the Banks and offices of exchange.

The sojourning and itinerant population consists of persons, from various climates, of various pursuits, various habits and modes of life, and consequently exhibiting varieties of diseases, produced by variety of climates, habits, callings and accidents.

This population stationary and sojourning and itinerant, demands, in humanity and good policy, corresponding pro-

visions for the poor, sick and disabled, in houses, infirmaries and hospitals, with the appropriate medical assistance. Such establishments exist in this city, and in addition to the State hospital, the United States have provided for another, not yet completed.

These descriptions of populations and establishments, attracted here by the means of commerce, furnish the essential desiderata; subjects, facts, instances, in great variety, treatments and results, experiments and discoveries; for the advancement of the science of medicine according to the inductive method. Subjects for anatomical dissections, examinations and demonstrations, are here furnished in abundance, to enable the student to perfect himself in anatomy; not only by seeing operations performed, but by taking the knife and the scalpel into his own hand, and by use to perfect himself in anatomy which is the foundation of science in medicine. The number of subjects, and the variety of the causes, which this city supplies in abundance for living surgery and morbid anatomy, give most important advantages for perfection in anatomy and surgery, for exactness of demonstration and induction.

The infirmaries and hospitals exhibiting so many instances of disease in such varieties afford means of accurate discrimination between diseases; the modes of treatment of cases similar in some of the circumstances, but yet distinct in character, and requiring different treatments. These advantages here abounding in such an eminent degree, afford to students the advantages of theory and practice combined.

These causes combined with the facility of coming and going, communication to and with other places in the valley of the Mississippi, and foreign parts; the climate, the habits and character of the resident population, point to this city as a most appropriate site for a Medical Institute in the valley of the West.

I pass minor detail for fear of trespassing too long upon the patience of the audience.

One prominent subject of gratulation upon the establishment of the Medical Institute, has not escaped my attention.

It grows out of the organization of the Institute and the administration of its affairs and purposes, through the president, trustees and faculty. I must pass this subject as delicacy requires. They did not invite me here to speak their commendation, in their own ears. Fame, with her trumpet, has preceded me in that.

Of the effects of the Medical Institute upon the city, I shall speak, not of the pecuniary advantages (large as they might be fairly accounted) but of the moral consequences.

The establishment of the Louisville Medical Institute is justly to be ascribed to the city. No endowment from the State, nor other quarter, than from the city, has been received.

This corporation has munificently contributed from its resources to found and endow this Medical Institute.

The establishment is interesting to humanity. The virtuous fame achieved by the establishment of such an Institute, with such liberality of endowment, is worthy of the ambition of a commonwealth. It is a monument of the philanthropy and public spirit of the city, which neither the destroying hand of time, nor envy, nor the ruthless force of war can deface. History, the remembrancer of exalted deeds, will write it in her imperishable record: and the gratitude of generation after generation, relieved, cheered, comforted, protected, and enlightened, by the beams of science radiating from the Louisville Medical Institute, will attest, at home and abroad, the benefits which have been conferred on the human family by the generous munificence of the founder.

This Literary establishment founded and endowed for purposes so humane and beneficial to the human family, has a natural tendency to elevate the character of the city at home and abroad. It has the moral tendency to inspire her citizens with a purer zeal in her behalf, with a delectable heartfelt satisfaction and commendable self-respect in calling themselves her citizens. For the truth of these propositions, I appeal to history, to the workings of the human heart in every age, in every clime, and to the sensibilities of every proud heart who loves his country.

Cities and nations being composed of individuals, the character of the city or nation is formed by the actings and doings of the individuals composing the city or nation. The public institutions of the country are good or bad, liberal or grovelling, according to the intellectual cultivation of the individuals, who, composing the city or nation, formed those institutions. The intelligence, characters and spirit of the citizens of a city, or State, impress themselves upon the institutions, public buildings and public establishments. These are visible signs and traits by which cities and nations acquire character, fame, or disgrace, just as the actions of individuals give them fame or disgrace. The character of a city or State is reflected from the liberality of her establishments and institutions, and public edifices, and the illustrious characters of her citizens, combined into one whole.

Punic faith is a sarcastic reproach stamped upon Carthage for bad faith and treachery. Beotia was characterized by dullness. Athens for the polish of literature and the fine arts. The cities of Greece and of Imperial Rome by their mental cultivation, embodied in their buildings, institutions, models of the fine arts, in the works of their poets, historians, orators and philosophers, have acquired a renown which has survived the wreck of time and the ravages of war, and promises to be imperishable.

Independent nations acknowledge no superiority; each claims for itself an equality. But the world, the public sentiment, the judgment of mankind, rank them according to the intelligence, liberality and soul, displayed by their institutions, literature, and illustrious men. Accordingly France, Scotland, England and Germany now take the lead in Europe. Ireland is acknowledged to be a land of genius and flow of soul. But since the annexation to the crown of Great Britain, she has been governed as a conquered colony, by a spirit of political and Hierarchical injustice, oppression and monopoly. Her character now is to be seen solely in the individual characters of her illustrious men. But moral causes are at work. The immutable laws of nature are operating. Injustice and oppression, sooner or later, will work their own

destruction. The noble spirits of Grattan, Fitzgerald, Emmet, and of the united Irishmen have not departed from Ireland: they yet animate the sons of Erin: they will snatch the sceptre from tyrants. Ireland will yet stand amongst the independent nations of the earth, redeemed and regenerated, shining in the moral grandeur of the genius, enterprise and natural advantages of the Emerald Isle.

Virginia prides herself on her colleges and universities; upon a long list of her illustrious men; and will not suffer the bones of Washington to be removed from her soil, to be placed in the Capitol of the United States.

Franklin, by the part he sustained in relation to the independence of the United States, and by his philosophical discoveries; particularly in demonstrating the identity of lightning and electricity, so that his points and conductors have added safety to ships at sea, and houses on land from the dangers of lightning, has added renown to his country, and elicited from foreigners, a medal, with the inscription:

"Eripuit cœlo fulmen, sceptrumque tyrannis," ("He snatched from heaven the thunder, and the sceptre from tyrants.")

In illustration of the position, that public institutions and illustrious men reflect fame upon cities, states and nations; I might call the roll of the signers of the Declaration of Independence; I might go through the States, and point to public establishments and public men, dead and living, of whom their respective countrymen are justly proud; because the character and fame of the State which produced them is elevated in the estimation of mankind.

But the immortal genius of Fulton ought not to be passed in silence on this occasion. His successful application of the power of Steam to the propelling of vessels, has conferred incalculable benefits on mankind, and added lustre and renown to his country. His genius has, comparatively, annihilated distance on the Western waters. It has developed the natural advantages of Louisville, and given an impulse to her commerce, which, *under proper direction* will be the means of accumulating immense wealth and great moral power.

This theme of the glory of cities and of nations, is fruitful in examples, and instructive as to the true sources of glory and permanency.

The city of Geneva with a population not greater than Louisville, surrounded by the mountains of Switzerland, has, by her schools and universities, by the impress of mind and morals, secured riches, good order, and happiness, to her citizens; attracted foreigners in numbers to her university; educates annually about one thousand in the higher departments of science, and has spread her fame far and wide. The United States received from Geneva that distinguished citizen Albert Gallatin, who so ably and so long administered the department of the Treasury in the times of the presidents, Jefferson and Madison.

The Medical Institute of Paris is annually crowded with foreigners, not excepting citizens of the United States.

So far as the fame of this city is concerned, the Medical Institute cannot fail to add grace, beauty, and moral grandeur; subjects well understood by Mr. Jefferson, in devoting his life, after retiring from the Presidency of the U. S., to the building, organizing, and establishing the University of Virginia, located at Charlottesville.

Patriotism is natural to the human heart. It begins at home, looks to the scenery and circumstances immediately around us. It does not, however, consist solely of attachment to the place which gave us birth, to the theatre of boyish sports and pleasures: it takes a more elevated view; it looks to the institutions and establishments which have cherished and protected us; to the fame and distinction, which the monuments of literature and of public spirit, which the sayings and doings of illustrious men, have won for the community. These are public property in which each individual feels that he has a communion. Such monuments of literature, good name and fame, impress upon the heart a refined patriotism, a holy glow, a delectable moral feeling for the place of our residence; not fully known to the individual himself, until journeying into another community, he shall hear his country, the community of his abode, commended or aspersed.

I repeat that the establishment of the Louisville Medical Institute has the moral effect to elevate the character of the city abroad, and to impress upon its citizens a purer and more delectable feeling in her behalf.

Another source of moral power to the city derived from this Institute is not to be overlooked. A number of medical students attracted here from other parts, must bring with them, necessarily, information and literary attainments, preparatory to the study of medicine, not solely useful in that department of science. These, associating with families in the city, forming friendships, holding communications, and emitting rays of intellect, must have great influence and effect in introducing a taste for learning; making an impression, as the drop by often falling, hollows the stone. The public lectures in the several departments, the conversations of the medical students from abroad and at home, the highly cultivated intellects of the faculty of the Medical Institute, imparting their lights within the bosom of the city, may be computed as constituting a body of moral power to give impetus to the intellectual improvement and moral action of the citizens.

These influences to which I have alluded cannot fail, in the aggregate, to elevate the character of this city, in the judgment of the generous, the humane, and the patriotic, at home and abroad.

Fellow-citizens: I have already alluded to the dangers of accumulated wealth, and abject poverty compressed into a dense mass, to which Louisville by reason of the advantages of her position, her great and increasing commerce and population, stationary, sojourning and itinerant, is eminently exposed. Nature operating by general laws prescribed to matter and mind, and not by partial laws, whilst giving to you the great advantages of local position, has likewise exposed you to the dangers to which these temptations may lead. But nature's God in perfect benevolence and moral excellence, hath placed the preventive within your reach. Ignorance, lust of riches, loose indulgence of animal appetites, and abject poverty, in two classes, are the poisons. The cultivation of science, knowledge, and morals, are the remedies. Great wealth, great poverty, and a large population densely compressed within the city, but divided into the two classes will

come, from the nature and advantages of your local position. But it is in the power of prudence and forecast, to ensure a class composed of men of knowledge, science, and morals sufficient in number, to execute the laws, maintain a sound, moral public sentiment, to overpower ignorant, audacious, insolent wealth, or crafty, fraudulent, ignorant poverty, or both extremes combined. Mental cultivation, humanity, morals, science, knowledge, justice and the benevolent affections, are the regulators and preservers. The ways of virtue lead to everlasting happiness. The ways of vice lead to misery and destruction.

The bane and antidote are both before you.

Men are too apt to forget, in prosperity the inconstancy of fortune, in health the means of preserving it, as well as the sympathies and offices of benevolence due to the afflicted. But a government is bound in benevolence and sacred duty to the community and the general welfare, to look to the future, to take all prudent precautions against distempers, endemical, contagious and infectious, whether incident to the body natural, or to the body politic. Be warned by the cities which once existed in opulence and splendor, but which now can be traced only by their mournful ruins, the haunts of beasts and birds.

Let us resolve wisely and do our duty to God, ourselves and posterity. Let us resolve for ourselves, let us instill it into the minds of our children, that the city as she increases in population, commerce and wealth, must enlarge and perfect her establishments for humanity and mental cultivation. By such means she may increase to a full orb of intellectual lustre, imparting the rays of knowledge, science, morals and happiness. The end is attainable by united will, prudence and perseverance. The consummation is worthy of generous efforts, and of the sublimest ambition.

May such be the elevated dignity and fair fame of the city of Louisville!

May she, with her Medical Institute, so stand on high as a bright example and shining star in the West, until the Sun himself shall grow dim with age, and Time shall be no more!